

The Republic of South Sudan

Ministry of Agriculture and Food Security

Ministry of Livestock and Fisheries

Ministry of Environment and Forestry



Comprehensive Agriculture Master Plan



CAMP

Annex I

CAMP Investment Plan

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1. Funding availability, requirements and allocation

This section discusses the relationship between funding availability, funding requirements and funding allocation. Funding availability is modelled under three public policy scenarios so as to predict the funds that might be available from the government and development partners. Funding requirements are estimated by the CAMP investment plan in the form of project costs. Another modelling exercise allocates the predicted available funds to each subsector. This approach shows that the choice of public policy will determine whether CAMP is fully implemented, or only partially implemented with delays and the associated lost opportunities in the agriculture sector. During CAMP implementation these three funding elements will be monitored and evaluated to allow for adjustment of the CAMP investment plan.

1.1 Funding availability and public policy

This section predicts economic growth (in terms of GDP) and available funds (government and development partners) for agricultural development over the CAMP implementation period of 25 years, which starts in fiscal year 2015/16 and ends in 2039/40. It uses a simple model based on 1) educated assumptions about potential economic growth, which also determines the growth of government revenue, and hence expenditure; and 2) three scenarios for different government policy choices on government expenditure allocation. The three scenarios are: 1) business as usual, 2) economic dividend and (3) peace dividend.

In all three scenarios, recurrent expenditures (salaries etc.) are not included in the funds available for CAMP implementation; only development expenditures are included (funds that allow the government and its employees to carry out activities to develop South Sudan).

This model and its predictions are used to 1) to show the importance of policy choices concerning government expenditure allocation, and 2) obtain realistic estimates of funds available for CAMP implementation for each scenario.

The predicted funds available in each scenario will be used to prioritise and sequence CAMP projects, so that 1) their total annual requirement for funds is within the limit predicted in the relevant funding availability scenario, and 2) maximum outcomes and impacts are secured with the available funds during CAMP implementation. The scenarios will also facilitate discussions by the government and stakeholders on policy decisions.

During CAMP implementation, the performance of the agriculture sector and the impact (e.g. GDP growth) of public interventions will be assessed periodically. The model and its assumptions about economic growth and government policy choices will be re-evaluated. For example, investment in the agriculture sector may increase economic growth which would allow more government expenditure; the model would have to be updated with new assumptions/parameters. Project prioritisation and sequencing may be revised to ensure optimal CAMP implementation.

1.1.1 Economic growth

Economic growth is the increase in the market value of the goods and services produced by an economy over time. It is conventionally measured as the percent rate of increase in real gross domestic product, or real GDP. Of more importance is the growth of the ratio of GDP to population (GDP per capita), which is also called per capita income.

Due to the limited availability of macroeconomic data, several assumptions were made in the model based on the examination of available data and educated judgement.

The national economy in early 2015 is characterised by the ongoing economic shock from the conflict that started in December 2013, compounded by the austerity measures starting in 2012. However, the economic shock of the conflict is not captured in this model due to the unavailability of reliable macroeconomic data for that period. Therefore, the real macroeconomic performance is expected to be worse than modelled. Volatile oil prices are not factored into the model.

1.1.1.1 Predicted economic growth rates

Table 1-1 shows the predicted economic growth rates for South Sudan up to 2039. The rates for the oil sector were taken from South Sudan Development Plan 2011.¹ The rates for the agriculture sector were determined by educated judgement: 1) phase I 3% growth, 2) phase II 4% growth 3) phase III 5% growth 4) phase IV continuing growth 5-6% due to improving agriculture sector performance. For other non-oil sectors, 1% higher growth rates were used as productivity in the agriculture sector generally grows more slowly than those in other sectors.

Table 1-1: Predicted economic growth rates

CAMP period	Fiscal Year (After 2012 Year FY starts July and ends June)	Gross domestic product (GDP) (constant price at 2009)											Assumed econ. growth rate in developed countries		
		Oil GDP	Non-oil GDP											Total	
			Government profit activities	Non- profit insti- tutions	Other activities						Sub- total				
				Agri- culture, livestock, forestry and fisheries	Trade, hotels and resta- urants	Manu- fac- turing and mining	Trans- port and commu- nication	Const- ruction	Other ser- vices	Sub- total					
	2008	2008													
	2009	2009	<u>11.1%</u>	5.7%	<u>63.0%</u>	-5.9%	-5.9%	-5.9%	-5.9%	-5.9%	-5.9%	-2.7%	<u>4.3%</u>		
	2010	2010	<u>-2.1%</u>	<u>14.7%</u>	<u>-18.3%</u>	<u>11.4%</u>	<u>11.4%</u>	<u>11.4%</u>	<u>11.4%</u>	<u>11.4%</u>	<u>11.4%</u>	<u>11.7%</u>	<u>4.2%</u>		
	2011	2011	<u>-1.0%</u>	9.7%	<u>-49.3%</u>	4.4%	4.4%	4.4%	4.4%	4.4%	4.4%	<u>5.0%</u>	<u>1.9%</u>		
	2012	2012/13	<u>-64.2%</u>	-32.8%	10.8%	-31.4%	-31.4%	-31.4%	-31.4%	-31.4%	-31.4%	-31.5%	<u>-47.6%</u>		
	2013	2013/14	<u>53.6%</u>	14.8%	-4.3%	8.6%	8.6%	8.6%	8.6%	8.6%	8.6%	10.0%	<u>24.7%</u>	1.0%	
	2014	2014/15	<u>89.2%</u>	39.5%	-9.4%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	10.3%	<u>43.0%</u>	1.0%	
Phase I	2015	2015/16	<u>18.5%</u>	10.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	5.3%	12.6%	1.0%	
	2016	2016/17	<u>-4.2%</u>	1.0%	4.0%	3.0%	4.0%	4.0%	4.0%	4.0%	4.0%	3.5%	2.7%	-1.3%	1.0%
	2017	2017/18	<u>-10.9%</u>	1.0%	4.0%	3.0%	4.0%	4.0%	4.0%	4.0%	4.0%	3.5%	2.7%	-4.9%	1.0%
	2018	2018/19	<u>-11.4%</u>	1.0%	4.0%	3.0%	4.0%	4.0%	4.0%	4.0%	4.0%	3.5%	2.7%	-4.7%	1.0%
	2019	2019/20	<u>-11.1%</u>	1.0%	4.0%	3.0%	4.0%	4.0%	4.0%	4.0%	4.0%	3.5%	2.7%	-4.0%	1.0%
Phase II	2020	2020/21	<u>-11.3%</u>	1.0%	4.0%	3.0%	4.0%	4.0%	4.0%	4.0%	4.0%	3.5%	2.7%	-3.6%	1.0%
	2021	2021/22	<u>-12.9%</u>	1.0%	4.0%	4.0%	5.0%	5.0%	5.0%	5.0%	5.0%	4.5%	3.4%	-3.4%	1.0%
	2022	2022/23	<u>-13.2%</u>	1.0%	4.0%	4.0%	5.0%	5.0%	5.0%	5.0%	5.0%	4.5%	3.4%	-2.8%	1.0%
	2023	2023/24	<u>-13.1%</u>	1.0%	4.0%	4.0%	5.0%	5.0%	5.0%	5.0%	5.0%	4.5%	3.5%	-2.1%	1.0%
	2024	2024/25	<u>-14.1%</u>	1.0%	4.0%	4.0%	5.0%	5.0%	5.0%	5.0%	5.0%	4.5%	3.5%	-1.7%	1.0%
Phase III	2025	2025/26	<u>-11.9%</u>	1.0%	4.0%	4.0%	5.0%	5.0%	5.0%	5.0%	5.0%	4.5%	3.5%	-0.5%	1.0%
	2026	2026/27	<u>-15.6%</u>	2.0%	4.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	4.1%	-0.4%	1.0%
	2027	2027/28	<u>-14.4%</u>	2.0%	4.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	4.2%	0.5%	1.0%
	2028	2028/29	<u>-14.6%</u>	2.0%	4.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	4.2%	1.1%	1.0%
	2029	2029/30	<u>-14.4%</u>	2.0%	4.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	4.2%	1.6%	1.0%
Phase IV	2030	2030/31	<u>-9.9%</u>	2.0%	4.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	4.2%	2.5%	1.0%
	2031	2031/32	<u>-11.2%</u>	3.0%	5.0%	5.0%	6.0%	6.0%	6.0%	6.0%	6.0%	5.6%	4.9%	3.2%	1.0%
	2032	2032/33	<u>-3.7%</u>	3.0%	5.0%	5.0%	6.0%	6.0%	6.0%	6.0%	6.0%	5.6%	4.9%	4.1%	1.0%
	2033	2033/34	<u>-13.5%</u>	4.0%	5.0%	5.0%	6.0%	6.0%	6.0%	6.0%	6.0%	5.6%	5.2%	3.6%	1.0%
	2034	2034/35	<u>-4.7%</u>	4.0%	5.0%	5.0%	6.0%	6.0%	6.0%	6.0%	6.0%	5.6%	5.2%	4.5%	1.0%
	2035	2035/36	<u>-11.0%</u>	4.0%	5.0%	5.0%	6.0%	6.0%	6.0%	6.0%	6.0%	5.6%	5.2%	4.2%	1.0%
	2036	2036/37	<u>-1.8%</u>	5.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	5.8%	5.4%	1.0%
	2037	2037/38	<u>0.0%</u>	5.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	5.8%	5.5%	1.0%
	2038	2038/39	<u>0.0%</u>	5.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	5.8%	5.5%	1.0%
	2039	2039/40	<u>0.0%</u>	5.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	5.8%	5.5%	1.0%
CAMP period average			<u>-8.7%</u>	2.7%	4.5%	4.5%	5.1%	5.1%	5.1%	5.1%	5.1%	4.8%	4.2%	1.1%	1.0%

Note: Agricultural sector values are indicated by bold numbers.

Source: NBS (underlined values); IMF (double underlined values); AfDB (double underlined Italic values); South Sudan Development Plan 2011 (underlined Italic values); CAMP TT (normal typeface values)

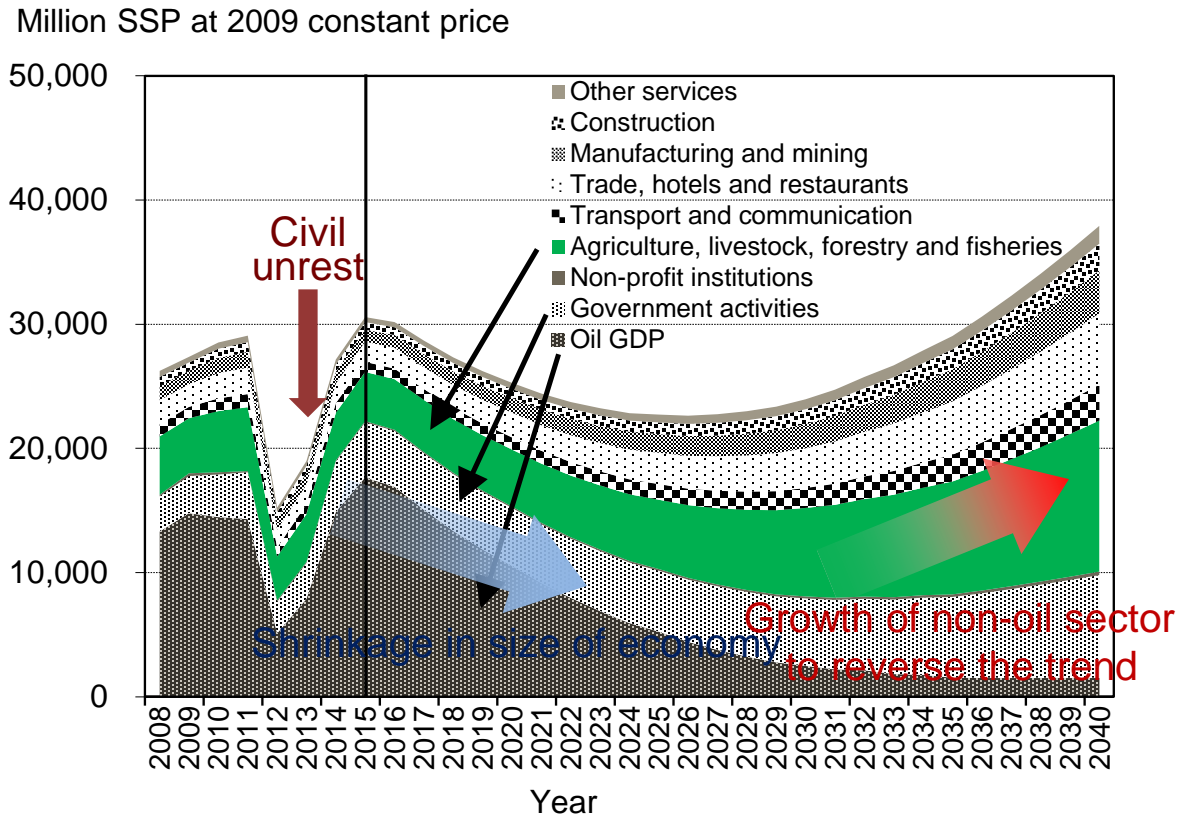
Non-oil sector growth rates were set to compensate for the decline in the oil sector. In order to secure these predicted high and stable growth rates, investment of oil based revenues in quality public service delivery, infrastructure development and production of goods for domestic or export markets is essential. Oil based revenues must be used for the creation of productive assets and improvement of sector productivity rather than for consumption.

¹ Government of the Republic of South Sudan. 2011. *South Sudan Development Plan 2011-2013*. Juba: GRSS.

1.1.1.2 Predicted contribution to GDP by sector

Table 1-2 shows the predicted GDP by sector using the growth rates in Table 1-1; it is presented graphically in Figure 1-1. Table 1-3 shows the predicted contribution to the GDP by each sector and is derived from Table 1-2.

Figure 1-1: Predicted GDP by sector



Source: NBS, IMF, AfDB, FAO and CAMP TT

Currently the oil sector is a dominant feature of GDP. At the time of independence in 2011 the oil sector contributed half of the national GDP. However, its contribution to the GDP is expected to reduce to less than a tenth of its initial value by the end of the CAMP implementation period, with an average annual growth rate of -8.7%.

Also significant is the shrinking size of the national economy in phases I and phase II (Table 1-2). Negative GDP growth ends in 2026 (phase III) at SSP22,637 million which is 74% of the GDP in 2015. After 2026, the GDP is forecasted to grow due to the predicted high GDP growth of non-oil sectors. Positive GDP growth continues until the end of CAMP implementation (2039), when the predicted national GDP is SSP 35,936 million or 118% of the initial year GDP. By 2039, the oil sector GDP is only 9% of its initial value; the agriculture sector GDP reaches SSP 11,479 million or 290% of its initial value; the other non-oil sectors grow to 335% of their initial value; and the government sector shows moderate growth of 177%.

The oil sector's contribution to the GDP is predicted to decline to 4% in the final year of CAMP implementation, from 58% in the first year (Table 1-3). On the other hand, the GDP contribution of other sectors increases. The agriculture sector GDP contribution increases from 13% to 32%. The contributions of the other non-oil sectors triple in this time period. The contribution of the government grows moderately from 15% to 22%. By the end of CAMP implementation, the largest contribution to the GDP is by the agriculture sector (32%).

Table 1-2: Predicted GDP by sector

CAMP period	Fiscal Year (After 2012 FY starts July and ends June)	Gross domestic product (GDP) at 2009 constant price (Million SSP)												
		Oil GDP	Non-oil GDP									Sub-total	Total	
			Government activities	Non-profit institutions	Agriculture, livestock, forestry and fisheries	Trade, hotels and restaurants	Manu- facturing and mining	Trans- port and commu- nication	Const- ruction	Other ser- vices				
	2008	2008	13,313	2,827	135	4,713	1,918	1,170	975	715	481	<u>9,972</u>	<u>12,934</u>	<u>26,247</u>
	2009	2009	14,792	2,988	220	4,432	1,804	1,100	917	673	453	<u>9,379</u>	<u>12,587</u>	<u>27,379</u>
	2010	2010	14,475	3,427	180	4,940	<u>2,010</u>	<u>1,226</u>	<u>1,022</u>	<u>749</u>	<u>504</u>	<u>10,452</u>	<u>14,059</u>	<u>28,533</u>
	2011	2011	14,325	3,760	91	5,155	2,098	1,280	1,067	782	526	<u>10,908</u>	<u>14,759</u>	<u>29,084</u>
	2012	2012/13	5,128	2,526	101	3,534	1,438	877	731	536	361	<u>7,477</u>	<u>10,104</u>	<u>15,232</u>
	2013	2013/14	<u>7,874</u>	2,900	97	3,838	1,562	953	794	582	392	8,121	11,118	<u>18,992</u>
	2014	2014/15	14,899	4,047	88	3,842	1,563	954	795	583	392	8,130	12,265	<u>27,163</u>
Phase I	2015	2015/16	<u>17,661</u>	4,452	90	3,958	1,610	983	819	600	404	8,374	12,916	30,577
	2016	2016/17	<u>16,914</u>	4,496	94	4,076	1,675	1,022	852	624	420	8,669	13,259	30,174
	2017	2017/18	<u>15,066</u>	4,541	98	4,199	1,742	1,063	886	649	437	8,975	13,614	28,680
	2018	2018/19	<u>13,349</u>	4,587	101	4,325	1,811	1,105	921	675	455	9,293	13,981	27,330
	2019	2019/20	<u>11,865</u>	4,632	106	4,454	1,884	1,149	958	702	473	9,621	14,359	26,224
Phase II	2020	2020/21	<u>10,530</u>	4,679	110	4,588	1,959	1,195	996	731	492	9,961	14,750	25,279
	2021	2021/22	<u>9,166</u>	4,725	114	4,771	2,057	1,255	1,046	767	516	10,413	15,253	24,419
	2022	2022/23	<u>7,959</u>	4,773	119	4,962	2,160	1,318	1,098	805	542	10,886	15,778	23,737
	2023	2023/24	<u>6,914</u>	4,820	123	5,161	2,268	1,384	1,153	846	569	11,381	16,325	23,240
2024	2024/25	<u>5,943</u>	4,869	128	5,367	2,381	1,453	1,211	888	598	11,899	16,896	22,838	
Phase III	2025	2025/26	<u>5,237</u>	4,917	134	5,582	2,501	1,526	1,271	932	627	12,440	17,491	22,728
	2026	2026/27	<u>4,421</u>	5,016	139	5,861	2,626	1,602	1,335	979	659	13,062	18,216	22,637
	2027	2027/28	<u>3,783</u>	5,116	144	6,154	2,757	1,682	1,402	1,028	692	13,715	18,975	22,758
	2028	2028/29	<u>3,230</u>	5,218	150	6,462	2,895	1,766	1,472	1,079	726	14,401	19,769	22,999
	2029	2029/30	<u>2,766</u>	5,323	156	6,785	3,039	1,855	1,545	1,133	763	15,121	20,600	23,365
Phase IV	2030	2030/31	<u>2,492</u>	5,429	163	7,124	3,191	1,947	1,623	1,190	801	15,877	21,468	23,960
	2031	2031/32	<u>2,212</u>	5,592	171	7,480	3,383	2,064	1,720	1,261	849	16,758	22,521	24,733
	2032	2032/33	<u>2,130</u>	5,760	179	7,854	3,586	2,188	1,823	1,337	900	17,689	23,628	25,758
	2033	2033/34	<u>1,842</u>	5,990	188	8,247	3,801	2,319	1,933	1,417	954	18,672	24,850	26,692
	2034	2034/35	<u>1,755</u>	6,230	198	8,659	4,029	2,458	2,049	1,502	1,011	19,709	26,137	27,891
	2035	2035/36	<u>1,562</u>	6,479	207	9,092	4,271	2,606	2,172	1,592	1,072	20,805	27,492	29,053
	2036	2036/37	<u>1,533</u>	6,803	220	9,638	4,527	2,762	2,302	1,688	1,136	22,054	29,076	30,609
	2037	2037/38	<u>1,533</u>	7,143	233	10,216	4,799	2,928	2,440	1,789	1,204	23,377	30,753	32,286
	2038	2038/39	<u>1,533</u>	7,500	247	10,829	5,087	3,104	2,586	1,897	1,276	24,779	32,527	34,060
	2039	2039/40	<u>1,533</u>	7,875	262	11,479	5,392	3,290	2,742	2,010	1,353	26,266	34,403	35,936

Note: Agricultural sector values are indicated by bold numbers.

Source: NBS (underlined values); IMF (double underlined values); AfDB (double underlined Italic values); South Sudan Development Plan. 2011 (underlined Italic values); CAMP TT (normal typeface values)

Table 1-3: Predicted contribution to GDP by sector

CAMP period	Fiscal Year (After 2012 FY starts July and ends June)	Gross domestic product (GDP) (constant price at 2009)											Total
		Oil GDP	Non-oil GDP									Sub-total	
			Government activities	Non-profit institutions	Agriculture, livestock, forestry and fisheries	Trade, hotels and restaurants	Manufacturing and mining	Transport and communication	Construction	Other services			
2008	2008	<u>51%</u>	<u>11%</u>	<u>1%</u>	<u>18%</u>	7%	4%	4%	3%	2%	<u>38%</u>	<u>49%</u>	<u>100%</u>
2009	2009	<u>54%</u>	<u>11%</u>	<u>1%</u>	<u>16%</u>	7%	4%	3%	2%	2%	<u>34%</u>	<u>46%</u>	<u>100%</u>
2010	2010	<u>51%</u>	<u>12%</u>	<u>1%</u>	<u>17%</u>	<u>7%</u>	<u>4%</u>	<u>4%</u>	<u>3%</u>	<u>2%</u>	<u>37%</u>	<u>49%</u>	<u>100%</u>
2011	2011	<u>49%</u>	<u>13%</u>	<u>0%</u>	<u>18%</u>	7%	4%	4%	3%	2%	<u>38%</u>	<u>51%</u>	<u>100%</u>
2012	2012/13	<u>34%</u>	17%	1%	<u>23%</u>	9%	6%	5%	4%	2%	49%	66%	<u>100%</u>
2013	2013/14	<u>41%</u>	15%	1%	<u>20%</u>	8%	5%	4%	3%	2%	43%	59%	<u>100%</u>
2014	2014/15	<u>55%</u>	15%	0%	<u>14%</u>	6%	4%	3%	2%	1%	30%	45%	<u>100%</u>
2015	2015/16	<u>58%</u>	15%	0%	<u>13%</u>	5%	3%	3%	2%	1%	27%	42%	100%
2016	2016/17	<u>56%</u>	15%	0%	<u>14%</u>	6%	3%	3%	2%	1%	29%	44%	100%
2017	2017/18	<u>53%</u>	16%	0%	<u>15%</u>	6%	4%	3%	2%	2%	31%	47%	100%
2018	2018/19	<u>49%</u>	17%	0%	<u>16%</u>	7%	4%	3%	2%	2%	34%	51%	100%
2019	2019/20	<u>45%</u>	18%	0%	<u>17%</u>	7%	4%	4%	3%	2%	37%	55%	100%
2020	2020/21	<u>42%</u>	19%	0%	<u>18%</u>	8%	5%	4%	3%	2%	39%	58%	100%
2021	2021/22	<u>38%</u>	19%	0%	<u>20%</u>	8%	5%	4%	3%	2%	43%	62%	100%
2022	2022/23	<u>34%</u>	20%	1%	<u>21%</u>	9%	6%	5%	3%	2%	46%	66%	100%
2023	2023/24	<u>30%</u>	21%	1%	<u>22%</u>	10%	6%	5%	4%	2%	49%	70%	100%
2024	2024/25	<u>26%</u>	21%	1%	<u>24%</u>	10%	6%	5%	4%	3%	52%	74%	100%
2025	2025/26	<u>23%</u>	22%	1%	<u>25%</u>	11%	7%	6%	4%	3%	55%	77%	100%
2026	2026/27	<u>20%</u>	22%	1%	<u>26%</u>	12%	7%	6%	4%	3%	58%	80%	100%
2027	2027/28	<u>17%</u>	22%	1%	<u>27%</u>	12%	7%	6%	5%	3%	60%	83%	100%
2028	2028/29	<u>14%</u>	23%	1%	<u>28%</u>	13%	8%	6%	5%	3%	63%	86%	100%
2029	2029/30	<u>12%</u>	23%	1%	<u>29%</u>	13%	8%	7%	5%	3%	65%	88%	100%
2030	2030/31	<u>10%</u>	23%	1%	<u>30%</u>	13%	8%	7%	5%	3%	66%	90%	100%
2031	2031/32	<u>9%</u>	23%	1%	<u>30%</u>	14%	8%	7%	5%	3%	68%	91%	100%
2032	2032/33	<u>8%</u>	22%	1%	<u>30%</u>	14%	8%	7%	5%	3%	69%	92%	100%
2033	2033/34	<u>7%</u>	22%	1%	<u>31%</u>	14%	9%	7%	5%	4%	70%	93%	100%
2034	2034/35	<u>6%</u>	22%	1%	<u>31%</u>	14%	9%	7%	5%	4%	71%	94%	100%
2035	2035/36	<u>5%</u>	22%	1%	<u>31%</u>	15%	9%	7%	5%	4%	72%	95%	100%
2036	2036/37	<u>5%</u>	22%	1%	<u>31%</u>	15%	9%	8%	6%	4%	72%	95%	100%
2037	2037/38	<u>5%</u>	22%	1%	<u>32%</u>	15%	9%	8%	6%	4%	72%	95%	100%
2038	2038/39	<u>5%</u>	22%	1%	<u>32%</u>	15%	9%	8%	6%	4%	73%	95%	100%
2039	2039/40	<u>4%</u>	22%	1%	<u>32%</u>	15%	9%	8%	6%	4%	73%	96%	100%

Note: Agricultural sector values are indicated by bold numbers.

Source: NBS (underlined values); IMF (double underlined values); AfDB (double underlined Italic values); South Sudan Development Plan. 2011 (underlined Italic values); CAMP TT (normal typeface values)

1.1.1.3 Predicted GDP per capita by sector

Table 1-4 shows the predicted GDP per capita based on Table 1-2. It was assumed that the annual population growth was 2%. All estimated values are presented at 2009 constant prices and SSP/USD exchange rate (2.31). Predicted GDP per capita declines from its highest value (USD 1,201) in 2015 to its lowest value (USD 696) in 2029. It then increases to USD 878 in 2039 which is 75% of its initial value. This will almost certainly lead to physical and food insecurity, which will need to be addressed by increased public investment in the non-oil sectors to accelerate the growth of the economy.

Table 1-4: Predicted GDP per capita by sector

CAMP period	Year	Fiscal Year	Population* ¹		GDP (million SSD at 2009 price)		GDP per capita (in SSP at 2009 price)	SSD/ USD 2009 rate	GDP per capita in USD (at 2009 rate)	
			growth	growth	growth	growth				
	2008	2008	<u>8,473,315</u>		<u>26,247</u>		3,098	2.31	1,341	
	2009	2009	<u>8,940,854</u>	5.52%	<u>27,379</u>	4.31%	3,062	2.31	1,326	-1.14%
	2010	2010	<u>9,415,421</u>	5.31%	<u>28,533</u>	4.22%	3,030	2.31	1,312	-1.04%
	2011	2011	<u>9,897,118</u>	5.12%	<u>29,084</u>	1.93%	2,939	2.31	1,272	-3.03%
	2012	2012/13	<u>10,386,000</u>	4.94%	<u>15,232</u>	-47.63%	1,467	2.31	635	-50.09%
	2013	2013/14	<u>10,594,000</u>	2.00%	<u>18,992</u>	24.68%	1,793	2.31	776	22.24%
	2014	2014/15	<u>10,806,000</u>	2.00%	<u>27,163</u>	43.02%	2,514	2.31	1,088	40.22%
Phase I	2015	2015/16	<u>11,022,000</u>	2.00%	30,577	12.57%	2,774	2.31	1,201	10.36%
	2016	2016/17	<u>11,242,000</u>	2.00%	30,174	-1.32%	2,684	2.31	1,162	-3.25%
	2017	2017/18	<u>11,467,000</u>	2.00%	28,680	-4.95%	2,501	2.31	1,083	-6.81%
	2018	2018/19	<u>11,696,000</u>	2.00%	27,330	-4.71%	2,337	2.31	1,012	-6.57%
	2019	2019/20	11,929,920	2.00%	26,224	-4.05%	2,198	2.31	952	-5.93%
Phase II	2020	2020/21	12,168,518	2.00%	25,279	-3.60%	2,077	2.31	899	-5.49%
	2021	2021/22	12,411,889	2.00%	24,419	-3.40%	1,967	2.31	852	-5.30%
	2022	2022/23	12,660,127	2.00%	23,737	-2.79%	1,875	2.31	812	-4.70%
	2023	2023/24	12,913,329	2.00%	23,240	-2.10%	1,800	2.31	779	-4.02%
	2024	2024/25	13,171,596	2.00%	22,838	-1.73%	1,734	2.31	751	-3.65%
Phase III	2025	2025/26	13,435,028	2.00%	22,728	-0.48%	1,692	2.31	732	-2.44%
	2026	2026/27	13,703,728	2.00%	22,637	-0.40%	1,652	2.31	715	-2.35%
	2027	2027/28	13,977,803	2.00%	22,758	0.53%	1,628	2.31	705	-1.44%
	2028	2028/29	14,257,359	2.00%	22,999	1.06%	1,613	2.31	698	-0.92%
	2029	2029/30	14,542,506	2.00%	23,365	1.59%	1,607	2.31	696	-0.40%
Phase IV	2030	2030/31	14,833,356	2.00%	23,960	2.54%	1,615	2.31	699	0.53%
	2031	2031/32	15,130,023	2.00%	24,733	3.23%	1,635	2.31	708	1.20%
	2032	2032/33	15,432,624	2.00%	25,758	4.14%	1,669	2.31	723	2.10%
	2033	2033/34	15,741,276	2.00%	26,692	3.63%	1,696	2.31	734	1.59%
	2034	2034/35	16,056,102	2.00%	27,891	4.49%	1,737	2.31	752	2.45%
	2035	2035/36	16,377,224	2.00%	29,053	4.17%	1,774	2.31	768	2.12%
	2036	2036/37	16,704,768	2.00%	30,609	5.36%	1,832	2.31	793	3.29%
	2037	2037/38	17,038,863	2.00%	32,286	5.48%	1,895	2.31	820	3.41%
	2038	2038/39	17,379,641	2.00%	34,060	5.49%	1,960	2.31	848	3.43%
	2039	2039/40	17,727,234	2.00%	35,936	5.51%	2,027	2.31	878	3.44%

Note: Agricultural sector values are indicated by bold numbers.

Source: NBS (underlined values); IMF (double underlined values); AfDB (double underlined Italic values); SouthSudan Development Plan. 2011 (underlined Italic values); CAMP TT (normal typeface values)

1.1.2 Funding availability scenarios

1.1.2.1 Predicted government expenditures and development partner support

To predict funds available for CAMP implementation, future government expenditures were estimated based on the following assumptions:

- Government revenues, and hence expenditures, will grow (or shrink) at the same rate as the GDP (overall economic growth rate in Table 1-1).²
- Development partner contributions will grow at a constant economic growth rate of 1% for developed countries.
- Execution rates of government budget and development partner commitments are assumed to be 95% and 70%.
- Predicted total expenditures are based on the average government budget and donor commitments for 2011/12 and 2012/13, using the execution rates above. Predictions are shown in 2011/12 constant prices.
- Development expenditures for the national government are predicted by assuming that initially 95% are recurrent expenditures and 5% development. This reflects the fact that currently the government is generally able to finance recurrent expenditures (salaries etc.) but has limited funds to allow its employees to carry out activities to develop South Sudan (hence the term development budget/expenditures)
- The average percentage of total expenditures in 2011/12 and 2012/13 allocated to the agriculture sector was 2.3%, which is based on the percentage of the budget allocated to the sector in those years.^{3, 4} This figure includes recurrent and development expenditures, so only 0.12% of national total expenditure was allocated to agriculture sector development.
- All development partner contributions are considered development expenditures.
- Predicted development expenditures for security expenditure is performed by subtracting the salary and pension costs. This is due to unavailability of security expenditure details.⁵
- The number of government officers is constant (no increase or decrease in size of government) and so recurrent expenditures are generally constant throughout CAMP implementation.

Predicted government expenditures and development partner support is shown in Table 1-5. Development expenditure for all sectors (except security) is predicted to decline consistently to become minimal in 2026/27 (phase III) and then grows rapidly. A total of SSP 26,861 million is available for non-security development expenditure over the 25 years of CAMP implementation. During this period, SSP 96,769 million is available for security development expenditures. Development partner support to development expenditures is expected to be stable and increase gradually for a total of SSP 8,939 million during this period.

² In this section, to predict government expenditures the overall GDP growth rate is used. However in Table 1-1 a different growth rate is used for the government sector. In theory they should be identical. However, due to limited availability of information a simple model is used. In the future a better model and data could be used.

³ MoFEP. 2011. *Approved Budget Book 2011/12*. Juba: GRSS.

⁴ MoFEP. 2012. *Approved Budget Book 2012/13*. Juba: GRSS.

⁵ Development expenditure from security expenditure is double counted: 1) as the remainder of security expenditure after salary and pension costs are deducted, 2) as 5% of government total expenditure, which includes security salary and pension costs. However, the resulting funds available to the agriculture sector from this double counting are small.

Table 1-5: Predicted government expenditures and development partner support

CAMP period	Fiscal year	Econ. growth rate		Government's expenditure forecasts									DPs
		Assumed national econ. growth rate	Assumed econ. growth rate in developed countries	National expenditure forecast						National security expenditure forecast (excluding salary and pension)			Support to ag. sector
	Government total expenditure			Recurrent expenditure		Development expenditure		Value	% to gov. total	Value	% to gov. total	Value	
	Value	Growth value	Value	% to g. total	Value	% to gov. total	Value						% to gov. total
	%	%	Mill.SSP	Mill.SSP	Mill.SSP	%	Mill.SSP	%	Mill.SSP	%	Mill.SSP	Mill.SSP	
		$\frac{a}{(1+a)}$ <i>(assumed values)</i>	$\frac{b}{(1+b)}$ <i>(assumed values)</i>	$c_t=c_{t-1}$ $d_t=c_t-c_{t-1}$ $*(1+a_t)$		$e=c*f$	$\frac{f=e/c}{(1+a)}$ <i>(assumed values)</i>	$g=c-e$	$h=g/c$	$i_t=i_{t-1}$ $*(1+a_t)$	$j=i/c$	$k_t=i_t-i_{t-1}$	$l_t=l_{t-1}$ $*(1+b_t)$
	Start value ¹			<u>6,851</u>						<u>2,207</u>			<u>307</u>
	2013/14	24.7%	1.0%	8,542	1,691	8,115	95%	427	5%	2,751	32%	545	310
	2014/15	43.0%	1.0%	12,217	3,675	11,606	95%	611	5%	3,935	32%	1,184	313
Phase I	2015/16	12.6%	1.0%	13,752	1,535	13,064	95%	688	5%	4,430	32%	494	317
	2016/17	-1.3%	1.0%	13,570	-181	12,892	95%	679	5%	4,371	32%	-58	320
	2017/18	-4.9%	1.0%	12,899	-672	12,254	95%	645	5%	4,155	32%	-216	323
	2018/19	-4.7%	1.0%	12,291	-607	11,677	95%	615	5%	3,959	32%	-196	326
	2019/20	-4.0%	1.0%	11,794	-498	11,322	96%	472	4%	3,799	32%	-160	329
Phase II	2020/21	-3.6%	1.0%	11,369	-425	10,914	96%	455	4%	3,662	32%	-137	333
	2021/22	-3.4%	1.0%	10,982	-387	10,653	97%	329	3%	3,538	32%	-125	336
	2022/23	-2.8%	1.0%	10,676	-307	10,355	97%	320	3%	3,439	32%	-99	339
	2023/24	-2.1%	1.0%	10,452	-224	10,243	98%	209	2%	3,367	32%	-72	343
	2024/25	-1.7%	1.0%	10,271	-180	10,066	98%	205	2%	3,309	32%	-58	346
Phase III	2025/26	-0.5%	1.0%	10,222	-50	10,119	99%	102	1%	3,293	32%	-16	350
	2026/27	-0.4%	1.0%	10,181	-41	10,181	100%			3,279	32%	-13	353
	2027/28	0.5%	1.0%	10,235		10,133	99%	102	1%	3,297	32%	18	357
	2028/29	1.1%	1.0%	10,344	108	10,137	98%	207	2%	3,332	32%	35	360
	2029/30	1.6%	1.0%	10,508	273	10,298	98%	210	2%	3,385	32%	53	364
Phase IV	2030/31	2.5%	1.0%	10,776	540	10,453	97%	323	3%	3,471	32%	86	367
	2031/32	3.2%	1.0%	11,123	888	10,790	97%	334	3%	3,583	32%	112	371
	2032/33	4.1%	1.0%	11,584	1,349	11,000	95%	584	5%	3,732	32%	149	375
	2033/34	3.6%	1.0%	12,004	1,769	11,000	92%	1,004	8%	3,867	32%	135	379
	2034/35	4.5%	1.0%	12,544	2,309	11,000	88%	1,544	12%	4,041	32%	174	382
	2035/36	4.2%	1.0%	13,066	2,831	11,000	84%	2,066	16%	4,209	32%	168	386
	2036/37	5.4%	1.0%	13,766	3,531	11,000	80%	2,766	20%	4,434	32%	225	390
	2037/38	5.5%	1.0%	14,520	4,285	11,000	76%	3,520	24%	4,677	32%	243	394
	2038/39	5.5%	1.0%	15,318	5,083	11,000	72%	4,318	28%	4,934	32%	257	398
	2039/40	5.5%	1.0%	16,162	5,927	11,000	68%	5,162	32%	5,206	32%	272	402
Total				300,412		273,551		26,861		96,769			8,939
Average		1.2%	1.0%				91%		9%		32%		

Source: CAMP TT

Note: 1) Start value is the average estimated national expenditures of FY 2011/12 and 2012/13. 2) Total and average values are calculated for CAMP period only.

1.1.2.2 Policy scenarios

Three policy scenarios are proposed to establish three corresponding funding availability scenarios.

Business as usual scenario: Only 0.12% (estimated percentage allocated in fiscal years 2011/12 and 2012/13) of total national expenditure will be allocated to agriculture sector development each year of the CAMP implementation period. In this case, the government does not recognise the importance of the agriculture sector and expenditure allocation will not change during CAMP implementation.

Economic dividend scenario: 5% of additional funds generated from economic growth is moved to the agriculture sector during the period of positive expenditure growth (i.e. from FY2027/28 to FY2039/40 of the CAMP period). The government recognises the importance of agriculture sector investment and significantly increases its allocation once economic growth, and hence government expenditures, becomes positive.

Peace dividend scenario: In addition to the increments in the economic dividend scenario, security expenditures (excluding salaries and pensions) are moved to the agriculture sector. The

shifts will increase gradually: 1% of security development expenditure in the 1st year, 2% in the 6th, 3% in the 11th, 4% in the 16th and 5% in the 21st. The government recognises the importance of agriculture sector investment and its urgency, and sets policy that, as political stability and peace is restored, immediately moves resources from the security to agriculture sector.

Only development expenditure will shift from other sectors to the agriculture sector; no recurrent expenditures or government officers are moved to the CAMP implementing ministries.

1.1.2.3 Predicted funds available to agriculture sector under all three scenarios

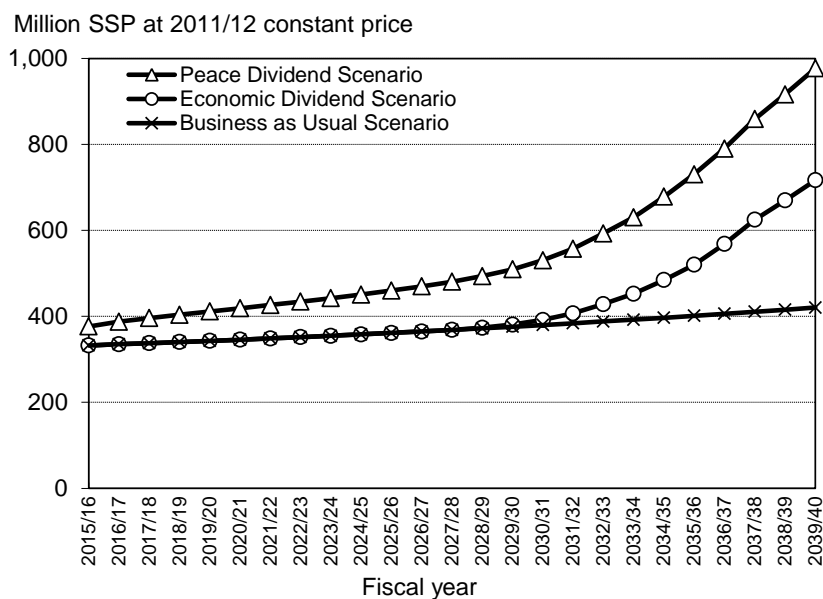
Based on projected government and development partner expenditures (Table 1-5) and the policy scenarios described, the funds available to the agriculture sector over the 25 years of CAMP implementation are calculated for all three funding availability scenarios. Results of the calculation are shown in in Table 1-6 and Figure 1-2. In the case of the business as usual scenario, USD 2,322 million is available; 4% is financed by the government and 96% by development partners. On the other hand, USD 3,456 million is available in the peace dividend scenario; the government contribution is 35% and the development partners' is 65%. The peace dividend scenario shows the highest overall allocation of funds to the development of the sector and the most percentage contribution from the government.

Table 1-6: Predicted funds available to agriculture sector under all three scenarios

CAMP period	Fiscal year	SSP and USD equivalent (Ex=SSP/USD= 4.00)						GRSS/DP contribution ratio					
		Business as Usual Scenario		Economic Dividend Scenario		Peace Dividend Scenario		Business as Usual Scenario		Economic Dividend Scenario		Peace Dividend Scenario	
		Mill. SSP	Mill. USD	Mill. SSP	Mill. USD	Mill. SSP	Mill. USD	GRSS	DP	GRSS	DP	GRSS	DP
		a	b=a/Ex	c	d=c/Ex	e	f=e/Ex	g	h	i	j	k	l
Phase I	2015/16	332	83	332	83	377	94	5%	95%	5%	95%	16%	84%
	2016/17	335	84	335	84	388	97	5%	95%	5%	95%	18%	82%
	2017/18	338	84	338	84	396	99	4%	96%	4%	96%	18%	82%
	2018/19	340	85	340	85	404	101	4%	96%	4%	96%	19%	81%
	2019/20	343	86	343	86	411	103	4%	96%	4%	96%	20%	80%
Phase II	2020/21	346	86	346	86	419	105	4%	96%	4%	96%	21%	79%
	2021/22	349	87	349	87	427	107	4%	96%	4%	96%	21%	79%
	2022/23	352	88	352	88	434	109	4%	96%	4%	96%	22%	78%
	2023/24	355	89	355	89	442	111	3%	97%	3%	97%	23%	77%
	2024/25	358	90	358	90	451	113	3%	97%	3%	97%	23%	77%
Phase III	2025/26	361	90	361	90	460	115	3%	97%	3%	97%	24%	76%
	2026/27	365	91	365	91	470	117	3%	97%	3%	97%	25%	75%
	2027/28	368	92	368	92	481	120	3%	97%	3%	97%	26%	74%
	2028/29	372	93	374	93	494	123	3%	97%	4%	96%	27%	73%
	2029/30	376	94	381	95	510	127	3%	97%	4%	96%	29%	71%
Phase IV	2030/31	380	95	392	98	531	133	3%	97%	6%	94%	31%	69%
	2031/32	384	96	407	102	558	139	3%	97%	9%	91%	33%	67%
	2032/33	388	97	429	107	593	148	3%	97%	13%	87%	37%	63%
	2033/34	392	98	453	113	630	158	4%	96%	16%	84%	40%	60%
	2034/35	397	99	485	121	679	170	4%	96%	21%	79%	44%	56%
	2035/36	401	100	520	130	731	183	4%	96%	26%	74%	47%	53%
	2036/37	406	101	568	142	790	198	4%	96%	31%	69%	51%	49%
	2037/38	411	103	625	156	859	215	4%	96%	37%	63%	54%	46%
	2038/39	416	104	670	167	916	229	4%	96%	41%	59%	57%	43%
	2039/40	421	105	717	179	977	244	4%	96%	44%	56%	59%	41%
Total	9,287	2,322	10,562	2,641	13,826	3,456	4%	96%	15%	85%	35%	65%	

Source: CAMP TT

Figure 1-2: Predicted funds available to agriculture sector under all three scenarios



Source: CAMP TT

1.1.2.4 Suggested allocation of funds to subsectors

The suggested allocation of funds to subsectors is presented in Table 1-7. The long term target allocation rates are for MAFCRD 1) ID 13% 2) crop 30%, 3) forestry 12% and for MLFI 1) ID 7%, 2) livestock 28% 3) fisheries 10%. Initial allocation rates for 2015/2016 were estimated from the percentage allocated to each subsector in the 2011/12 and 2012/13 government budget and development partner commitments. Subsequent rates were determined based on the future estimated share of GDP by the subsectors. For example, initially the crop subsector will have a large allocation (91%) but the target allocation will be achieved by 2026/27 in phase III.

Table 1-7: Suggested allocation of funds to subsectors

CAMP period	Fiscal year	Allocation rates of the subsectors (excluding irrigation subsector)								Total
		MAFCRD and Agriculture Bank				MLFI				
		ID	Crop	Forestry	Total	ID	Livestock	Fisheries	Total	
		% to Total	% to Total	% to Total	% to Total	% to Total	% to Total	% to Total	% to Total	
Phase I	2015/16	1%	91%	3%	95%	1%	2%	2%	5%	100%
	2016/17	1%	89%	3%	93%	1%	3%	3%	7%	100%
	2017/18	2%	85%	3%	90%	2%	4%	4%	10%	100%
	2018/19	3%	80%	4%	87%	2%	7%	4%	13%	100%
	2019/20	3%	75%	5%	83%	2%	11%	4%	17%	100%
Phase II	2020/21	4%	69%	6%	79%	2%	14%	5%	21%	100%
	2021/22	4%	63%	7%	74%	3%	18%	5%	26%	100%
	2022/23	5%	57%	8%	70%	3%	21%	6%	30%	100%
	2023/24	7%	51%	9%	67%	4%	22%	7%	33%	100%
	2024/25	9%	44%	10%	63%	5%	24%	8%	37%	100%
Phase III	2025/26	11%	37%	11%	59%	6%	26%	9%	41%	100%
	2026/27	13%	30%	12%	55%	7%	28%	10%	45%	100%
	2027/28	13%	30%	12%	55%	7%	28%	10%	45%	100%
	2028/29	13%	30%	12%	55%	7%	28%	10%	45%	100%
	2029/30	13%	30%	12%	55%	7%	28%	10%	45%	100%
Phase IV	2030/31	13%	30%	12%	55%	7%	28%	10%	45%	100%
	2031/32	13%	30%	12%	55%	7%	28%	10%	45%	100%
	2032/33	13%	30%	12%	55%	7%	28%	10%	45%	100%
	2033/34	13%	30%	12%	55%	7%	28%	10%	45%	100%
	2034/35	13%	30%	12%	55%	7%	28%	10%	45%	100%
	2035/36	13%	30%	12%	55%	7%	28%	10%	45%	100%
	2036/37	13%	30%	12%	55%	7%	28%	10%	45%	100%
	2037/38	13%	30%	12%	55%	7%	28%	10%	45%	100%
	2038/39	13%	30%	12%	55%	7%	28%	10%	45%	100%
	2039/40	13%	30%	12%	55%	7%	28%	10%	45%	100%
Target allocation rates		13%	30%	12%	55%	7%	28%	10%	45%	100%

Source: CAMP TT

1.1.2.5 Predicted total funds allocated to subsectors under all three scenarios

The ratio of total funds allocated to each subsector is similar in all three scenarios (Table 1-8). For example, in the peace dividend scenario, total funds of SSP 13,826 million (USD 3,456 million) are allocated as follows: for MAFCRD 1) institutional development 10%, 2) crop 42%, 3) forestry 10%, and for MLFI 1) institutional development 6%, 2) livestock 23%, fisheries 8%. Initially, due to the expected large share of GDP of the crop and livestock subsectors, a larger proportion of funds was allocated to these 2 subsectors.

For CAMP implementation, the peace dividend scenario is recommended as the government's policy and funding availability scenario.

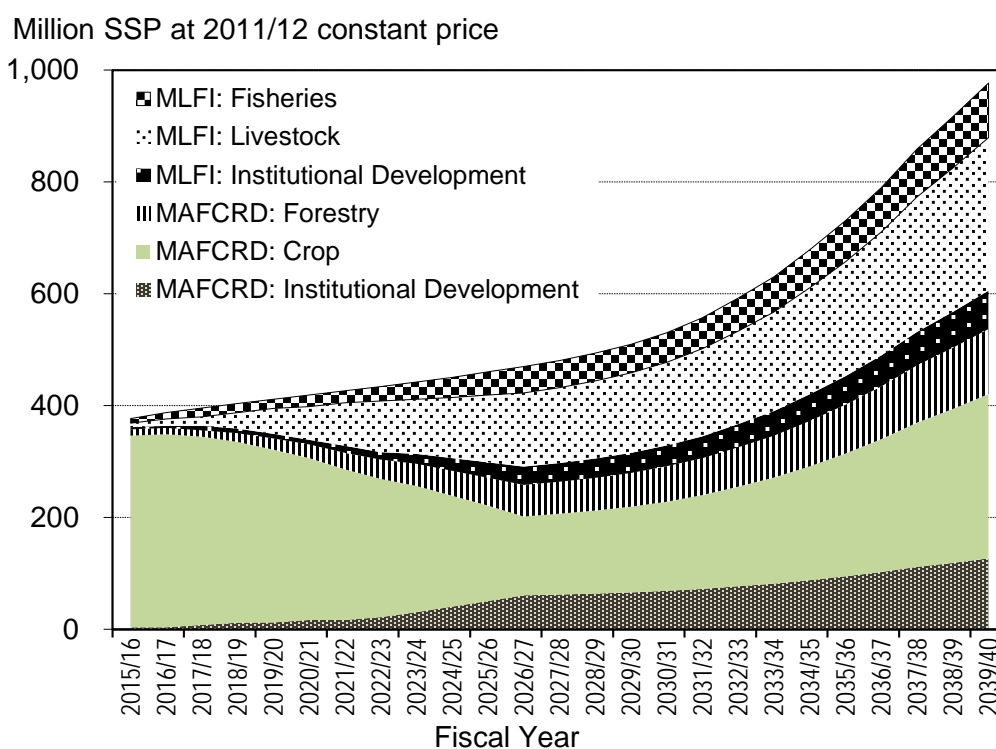
Table 1-8: Predicted total funds allocated to subsectors under all three scenarios

(SSP/USD=4.00)

Scenarios		Business as Usual Scenario			Economic Dividend Scenario			Peace Dividend Scenario		
		SSP Million	USD Million	% to total	SSP Million	USD Million	% to total	SSP Million	USD Million	% to total
MAFCRD and AB	Institutional Development	888	222	10%	1,054	264	10%	1,416	354	10%
	Crop Subsector	4,192	1,048	45%	4,574	1,144	43%	5,821	1,455	42%
	Forestry Subsector	899	225	10%	1,052	263	10%	1,403	351	10%
	Sub-total	5,979	1,495	64%	6,681	1,670	63%	8,639	2,160	62%
MLFI	Institutional Development	492	123	5%	582	145	6%	779	195	6%
	Livestock Subsector	2,068	517	22%	2,426	606	23%	3,241	810	23%
	Fisheries Subsector	747	187	8%	875	219	8%	1,166	292	8%
	Sub-total	3,308	827	36%	3,882	970	37%	5,186	1,297	38%
Total		9,287	2,322	100%	10,562	2,641	100%	13,826	3,456	100%

Source: CAMP TT

Figure 1-3: Predicted funds allocated to subsectors under peace dividend scenario



Source: CAMP TT

Table 1-9: Predicted funds allocated to subsectors under peace dividend scenario

(SSP/USD= 4.00)

CAMP period	Fiscal year	Predicted funds allocated to subsectors																		
		MAFCRD and Agriculture Bank								MLFI						Total				
		ID		Crop		Forestry		Total		ID		Livestock		Fisheries		Total		Mill. SSP	Mill. USD	% growth
		Mill. SSP	Mill. USD	Mill. SSP	Mill. USD	Mill. SSP	Mill. USD	Mill. SSP	Mill. USD	Mill. SSP	Mill. USD	Mill. SSP	Mill. USD	Mill. SSP	Mill. USD					
Phase I	2015/16	4	1	343	86	11	3	358	89	4	1	8	2	8	2	19	5	377	94	
	2016/17	4	1	345	86	12	3	361	90	4	1	12	3	12	3	27	7	388	97	3.0%
	2017/18	8	2	337	84	12	3	356	89	8	2	16	4	16	4	40	10	396	99	2.1%
	2018/19	12	3	323	81	16	4	351	88	8	2	28	7	16	4	52	13	404	101	1.9%
	2019/20	12	3	309	77	21	5	341	85	8	2	45	11	16	4	70	17	411	103	1.9%
Phase II	2020/21	17	4	289	72	25	6	331	83	8	2	59	15	21	5	88	22	419	105	1.9%
	2021/22	17	4	269	67	30	7	316	79	13	3	77	19	21	5	111	28	427	107	1.8%
	2022/23	22	5	248	62	35	9	304	76	13	3	91	23	26	7	130	33	434	109	1.8%
	2023/24	31	8	226	56	40	10	296	74	18	4	97	24	31	8	146	36	442	111	1.9%
	2024/25	41	10	198	50	45	11	284	71	23	6	108	27	36	9	167	42	451	113	1.9%
Phase III	2025/26	51	13	170	43	51	13	272	68	28	7	120	30	41	10	189	47	460	115	2.1%
	2026/27	61	15	141	35	56	14	258	65	33	8	132	33	47	12	211	53	470	117	2.1%
	2027/28	62	16	144	36	58	14	264	66	34	8	135	34	48	12	216	54	481	120	2.3%
	2028/29	64	16	148	37	59	15	272	68	35	9	138	35	49	12	222	56	494	123	2.7%
	2029/30	66	17	153	38	61	15	280	70	36	9	143	36	51	13	229	57	510	127	3.2%
Phase IV	2030/31	69	17	159	40	64	16	292	73	37	9	149	37	53	13	239	60	531	133	4.1%
	2031/32	72	18	167	42	67	17	307	77	39	10	156	39	56	14	251	63	558	139	5.1%
	2032/33	77	19	178	44	71	18	326	82	42	10	166	42	59	15	267	67	593	148	6.3%
	2033/34	82	20	189	47	76	19	347	87	44	11	177	44	63	16	284	71	630	158	6.3%
	2034/35	88	22	204	51	81	20	373	93	47	12	190	47	68	17	305	76	679	170	7.6%
	2035/36	95	24	219	55	88	22	402	100	51	13	205	51	73	18	329	82	731	183	7.7%
	2036/37	103	26	237	59	95	24	435	109	55	14	221	55	79	20	356	89	790	198	8.1%
	2037/38	112	28	258	64	103	26	472	118	60	15	240	60	86	21	386	97	859	215	8.7%
	2038/39	119	30	275	69	110	27	504	126	64	16	257	64	92	23	412	103	916	229	6.7%
	2039/40	127	32	293	73	117	29	537	134	68	17	274	68	98	24	440	110	977	244	6.6%
Total investment		1,416	354	5,821	1,455	1,403	351	8,639	2,160	779	195	3,241	810	1,166	292	5,186	1,297	13,826	3,456	4.1%
% to Total		10%		42%		10%		62%		6%		23%		8%		38%		100%		

Source: CAMP TT

1.1.2.6 Predicted funds allocated to subsectors under peace dividend scenario

Table 1-9 and Figure 1-3 shows the predicted funds allocated to the agriculture subsectors under the peace dividend scenario. Initially 91% of available funds was allocated to the crop subsector, based on the 2011/12 and 2012/13 government budget and development partner commitments (Table 1-7). After that there is a decline in allocated funds until FY 2026/27. Over this period of time more funds are moved to other subsectors, in particular to institutional development projects, and to MLFI to finance livestock projects so as to increase its share of the GDP. The funding of projects in each subsector will be constrained by the annual funding allocations presented in Table 1-9.

1.2 Agriculture sector public investment under the peace dividend scenario

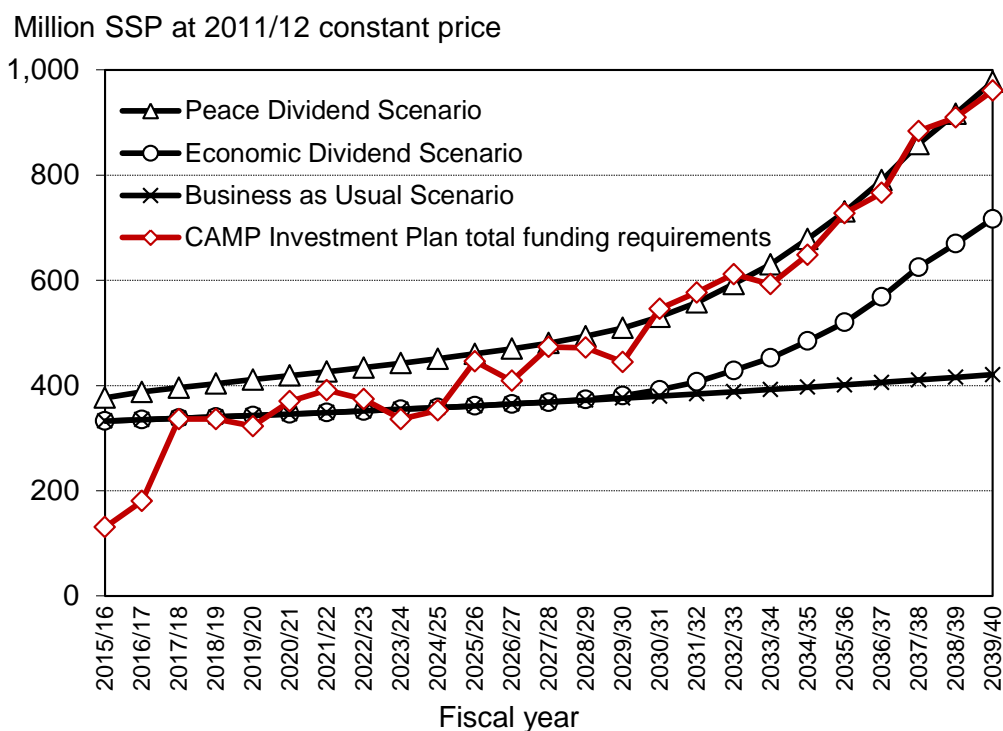
1.2.1 CAMP investment plan funding requirements

Projects are proposed in the CAMP investment plan as project profiles, where the costs to implement them are also estimated. These costs include a "project cost" to implement a project and a "scaling-up cost", which includes costs necessary to carry out routine activities and to scale-up and intensify activities, for example successful pilot schemes will be implemented in other locations. The "project cost" is presented in part 3 of each project profile in this annex, and the "scaling-up cost" is presented in the "Summary of annual project cost and scaling-up cost" section of each subsector. The "scaling-up cost" is estimated to be approximately twice the "project cost." These costs are the funding requirements for the CAMP investment plan.

The required costs could be met by funds made available under the peace dividend scenario. The selection of the other two policy scenarios does not yield sufficient funds for implementation (Figure 1-4). Therefore, the government's ability and determination to secure funds for CAMP

implementation by diverting funds from the security budget to agriculture sector development will be crucial for the success of agriculture development in South Sudan. In the CAMP investment plan (Table 1-10) it is estimated that it will cost USD 3,149 million to implement the CAMP projects, which is 91% of the total available funds (USD 3,456 million) under the peace dividend policy scenario.

Figure 1-4: CAMP investment plan funding requirements under three policy scenarios



Source: CAMP TT

1.2.2 Project and scaling-up costs

The funding requirements by subsector over the 25 year period of CAMP implementation are presented in Table 1-10. The total funding requirements of the CAMP investment plan are USD 3,149 million, consisting of project costs of USD 1,028 million (33%) and scaling-up costs of USD 2,121 million (67%). The institutional development subsector has the largest funding requirements of USD 852 million, followed by the crop (USD 747 million), forestry (USD 679 million), livestock (USD 469 million) and fisheries (USD 402 million) subsectors.

Project costs for all subsectors are relatively large in Phase I, with a rapid increase in Phase II, a gradual decline in Phase III, and reduced or phased out costs in Phase IV (Table 1-10). Large project costs need to be met in Phases I and II, which is where available funds are anticipated to be limited due to the expected decline in GDP and government revenues, and the limited increase in development partners' contributions throughout the CAMP period (1%/year). On the other hand the scaling-up costs show the opposite trend. They appear in Phase II, rapidly increase in Phase III, and further increase in Phase IV. This assumes a rapid expansion of routine work, and an increase in intensity and geographical coverage of public service delivery, based on service delivery models tested by implementation of the proposed projects.

The cost structure of the CAMP investment plan is summarised in Table 1-11. Fifty percent of the total costs of the CAMP investment plan are allocated to the cost group of "management and operation of project." Since half of these costs are incurred by "procurement of professional services (contracted)", efficient and effective application of professional services and outsourcing will be key for a successful CAMP implementation. The cost group of "construction of infrastructure and procurement of equipment" is the second largest cost group (34%), with feeder roads

construction consuming half of the costs (14%). The remainder of the costs (15%) are incurred by the cost group “subsidies, equity and loans.”

Table 1-10: CAMP investment plan funding requirements

SSP/USD = 4.00

CAMP period	Fiscal year	Funding requirement by subsectors (Million SSP)																						
		Crop			Livestock			Forestry			Fisheries			ID of two ministries		Total			% to grand total					
		Project costs	Scaling-up costs	Total	Project costs	Scaling-up costs	Total	Project costs	Scaling-up costs	Total	Project costs	Scaling-up costs	Total	Project costs	Scaling-up costs	Total	Project costs	Scaling-up costs	Total	Phase total				
Phase I	15/16	53		53	8		8	49	0	49	8		8	13		13	131	0	131	1%	0%	1%		
	16/17	74		74	9		9	64	2	66	12	0	12	19		19	178	2	180	1%	0%	1%		
	17/18	129		129	7		7	75	3	78	18	0	18	104		104	333	3	336	3%	0%	3%	10%	
	18/19	112	3	115	7	3	10	75	3	78	20	0	20	108	3	112	323	13	336	3%	0%	3%		
	19/20	68	7	75	6	5	10	94	5	99	18	1	18	114	6	120	300	23	323	2%	0%	3%		
Phase II	20/21	59	32	91	62	5	67	69	6	76	15	3	18	112	7	118	317	53	370	3%	0%	3%		
	21/22	57	43	100	62	7	69	65	12	77	16	4	21	115	9	124	316	75	391	3%	1%	3%		
	22/23	40	41	81	63	6	70	59	20	79	21	11	31	101	11	113	284	90	374	2%	1%	3%	14%	
	23/24	35	30	65	42	11	53	59	18	77	20	11	32	99	11	110	255	81	336	2%	1%	3%		
24/25	44	28	72	36	11	46	59	28	87	26	12	39	97	12	109	262	90	353	2%	1%	3%			
Phase III	25/26	39	83	122	25	67	92	63	29	92	28	16	44	77	19	96	233	213	446	2%	2%	4%		
	26/27	19	88	107	16	59	76	65	22	87	27	19	46	77	16	93	205	204	409	2%	2%	3%		
	27/28	12	148	159	8	50	58	61	23	84	26	20	46	7	119	126	113	360	473	1%	3%	4%	18%	
	28/29	9	140	149	8	49	57	57	27	84	23	23	46	1	135	136	97	374	472	1%	3%	4%		
29/30	9	89	98	7	49	56	83	29	112	17	30	46	0	132	132	116	329	445	1%	3%	4%			
Phase IV	30/31	6	119	125	1	95	97	54	52	106	15	39	54	1	164	165	76	469	546	1%	4%	4%		
	31/32	2	109	112	1	104	105	49	64	113	19	49	68	1	179	180	72	505	577	1%	4%	5%		
	32/33	2	118	120	1	104	105	47	86	133	16	55	72			182	182	66	546	612	1%	4%	5%	24%
	33/34	2	111	113	1	92	93	47	71	118	29	61	90			179	179	79	514	592	1%	4%	5%	
	34/35	2	113	115	1	97	99	47	96	143	16	86	102			190	190	67	582	649	1%	5%	5%	
	35/36	1	139	139		133	133	44	123	168	16	95	111			177	177	61	666	727	0%	5%	6%	
	36/37	1	141	142		128	128	47	113	159	29	121	150			186	186	77	689	766	1%	5%	6%	
	37/38	1	227	228		131	131	43	128	171	16	128	144			209	209	60	824	884	0%	7%	7%	34%
	38/39	1	222	223		136	136	43	143	186	2	167	169			195	195	46	864	910	0%	7%	7%	
39/40	1	179	180		162	162	43	152	194	2	199	201			222	222	45	915	961	0%	7%	8%		
Total	777	2,209	2,986	371	1,506	1,877	1,462	1,256	2,718	456	1,151	1,607	1,046	2,363	3,409	4,112	8,485	12,597	33%	67%	100%	100%		
(Mill.USD)	194	552	747	93	376	469	366	314	679	114	288	402	262	591	852	1,028	2,121	3,149						

Source: CAMP TT

Table 1-11: Cost structure of CAMP investment plan

SSP/USD = 4.00

Cost groups	Project cost/ Scaling-up cost	SSP (million)						USD (million)						% to grand total
		Crop	Livestock	Forestry	Fisheries	ID	Total	Crop	Livestock	Forestry	Fisheries	ID	Total	
CAMP Investment Plan total	Project cost	777	371	1,462	456	1,046	4,112	194	93	366	114	262	1,028	33%
	Scaling-up cost	2,209	1,506	1,256	1,151	2,363	8,485	552	376	314	288	591	2,121	67%
	Grand total	2,986	1,877	2,718	1,607	3,409	12,597	747	469	679	402	852	3,149	100%
1 Management and operation of project	Project cost	552	225	1,262	224	145	2,408	138	56	316	56	36	602	19%
	Scaling-up cost	1,290	1,060	655	518	402	3,925	323	265	164	129	100	981	31%
	Total	1,842	1,285	1,917	742	547	6,333	461	321	479	186	137	1,583	50%
1.1 Deployment of government staff	Project cost	9	13	13	1	1	38	2	3	3	0	0	10	0%
	Scaling-up cost	42	71	16	5	12	145	10	18	4	1	3	36	1%
	Sub-total	51	83	29	6	14	183	13	21	7	2	3	46	1%
1.2 Procurement of administrative services (contracted)	Project cost	4	40	0	2	0	46	1	10	0	0	0	12	0%
	Scaling-up cost	12	165	0	14	1	192	3	41	0	3	0	48	2%
	Sub-total	16	205	0	16	1	238	4	51	0	4	0	59	2%
1.3 Procurement of professional services (contracted)	Project cost	408	87	115	198	81	888	102	22	29	49	20	222	7%
	Scaling-up cost	731	515	418	394	190	2,247	183	129	105	99	47	562	18%
	Sub-total	1,139	601	533	592	270	3,135	285	150	133	148	68	784	25%
1.4 Implementation of staff training	Project cost	69	62	20	16	62	230	17	16	5	4	16	57	2%
	Scaling-up cost	326	254	53	47	197	877	81	64	13	12	49	219	7%
	Sub-total	395	316	73	63	260	1,107	99	79	18	16	65	277	9%

Source: CAMP TT

Table 1-11: Cost structure of CAMP investment plan funding requirements (cont.)

Cost groups	Project cost/ Scaling-up cost	SSP (million)					USD (million)					% to grand total		
		Crop	Livestock	Forestry	Fisheries	ID	Total	Crop	Livestock	Forestry	Fisheries		ID	Total
1.5 Implementation of research, studies and surveys	Project cost	0		1,059			1,059	0		265			265	8%
	Scaling-up cost	1		8			9	0		2			2	0%
	Sub-total	1		1,066			1,068	0		267			267	8%
1.6 Delivery of extension and training services to the private sector	Project cost	44	0	6	2		52	11	0	1	0		13	0%
	Scaling-up cost	133	0	27	24		185	33	0	7	6		46	1%
	Sub-total	177	0	33	26		236	44	0	8	6		59	2%
1.7 Operation and maintenance	Project cost	17	24	50	5	0	95	4	6	12	1	0	24	1%
	Scaling-up cost	46	56	134	33	2	271	12	14	33	8	0	68	2%
	Sub-total	63	80	183	38	2	366	16	20	46	10	0	92	3%
2 Construction of infrastructure and procurement of equipment	Project cost	150	79	163	171	844	1,407	37	20	41	43	211	352	11%
	Scaling-up cost	342	72	316	374	1,829	2,932	85	18	79	93	457	733	23%
	Total	491	150	479	545	2,673	4,339	123	38	120	136	668	1,085	34%
2.1 Construction of office buildings	Project cost	1		17	2	121	140	0		4	0	30	35	1%
	Scaling-up cost	8		18	1	201	228	2		5	0	50	57	2%
	Sub-total	9		35	2	322	368	2		9	1	81	92	3%
2.2 Construction of research, training and other specialized buildings	Project cost	103	40	58	30		229	26	10	14	7		57	2%
	Scaling-up cost	218	2	65	13		297	54	1	16	3		74	2%
	Sub-total	320	42	122	42		527	80	10	31	11		132	4%
2.3 Construction of feeder roads	Project cost			15		537	552			4		134	138	4%
	Scaling-up cost			56		1,216	1,272			14		304	318	10%
	Sub-total			71		1,753	1,824			18		438	456	14%
2.4 Construction of production, market and transportation facilities	Project cost	4	18	28	125	160	335	1	4	7	31	40	84	3%
	Scaling-up cost	8	32	106	209	363	718	2	8	26	52	91	179	6%
	Sub-total	12	50	134	334	523	1,052	3	13	33	83	131	263	8%
2.5 Acquisition of land	Project cost			2			2			1			1	0%
	Scaling-up cost			3			3			1			1	0%
	Sub-total			6			6			1			1	0%
2.6 Procurement of vehicles	Project cost	23	6	37	5	20	90	6	2	9	1	5	23	1%
	Scaling-up cost	44	12	18	10	34	118	11	3	5	2	9	30	1%
	Sub-total	67	18	55	15	54	208	17	5	14	4	14	52	2%
2.7 Procurement of equipment	Project cost	20	15	6	10	7	58	5	4	2	3	2	14	0%
	Scaling-up cost	64	26	50	142	15	296	16	6	12	35	4	74	2%
	Sub-total	84	40	56	152	21	353	21	10	14	38	5	88	3%
3 Subsidies, equity and loans	Project cost	75	68	37	60	57	297	19	17	9	15	14	74	2%
	Scaling-up cost	577	374	285	260	132	1,628	144	93	71	65	33	407	13%
	Total	653	441	322	320	189	1,925	163	110	81	80	47	481	15%
3.1 Provision of cash and/or in-kind subsidies	Project cost	48	61	32	18	54	213	12	15	8	4	14	53	2%
	Scaling-up cost	434	329	182	38	127	1,111	109	82	46	10	32	278	9%
	Sub-total	483	390	215	56	181	1,324	121	98	54	14	45	331	11%
3.2 Provision of training services to the private sector	Project cost	27	7	5	2	3	44	7	2	1	1	1	11	0%
	Scaling-up cost	143	45	102	10	5	306	36	11	26	3	1	76	2%
	Sub-total	170	51	107	13	8	349	42	13	27	3	2	87	3%
3.3 Equity investments	Project cost													
Scaling-up cost														
Sub-total														
3.4 Provision of loans	Project cost				40		40				10		10	0%
	Scaling-up cost				212		212				53		53	2%
	Sub-total				252		252				63		63	2%
3.5 Social assistance/donation (Emergency)	Project cost													
	Scaling-up cost													
	Sub-total													

Source: CAMP TT

1.2.3 Subsector funding allocation versus requirements

A comparison between the funds allocated to each subsector and their funding requirements are presented in Table 1-12, Figure 1-5, Figure 1-6, Figure 1-7, Figure 1-8 and Figure 1-9. The total funding requirements (project plus scaling-up costs) estimated for the crop and livestock subsectors are less than the funds allocated to these subsectors in Table 1-9. The total estimated funding requirements of projects in the crop subsector are only 51% of the funds allocated (Figure 1-5). This is particularly noticeable during Phase I and II of the CAMP period, when it is expected that the full allocation will be used to fund various emergency measures and ongoing projects that are not included in the CAMP investment plan. These activities will be identified and included in funding requirements during initial resource mobilisation. In the livestock subsector 84% of the allocation is required (Figure 1-6) leaving some room for further expansion and scaling-up of projects. It also may indicate that livestock subsector projects require fewer funds than other subsectors.

The estimated funding requirements of projects in the forestry, fisheries and institutional development subsectors exceed the allocated funds. The inclusion of a large forestry project (National forest resources inventory, information and management plans project), which will benefit all the natural and land resources management ministries and authorities, results in the total funding requirements being 134% of the allocated funds (Table 1-12 and Figure 1-7). For the fisheries subsector, during Phase I through Phase III, the total funding requirements match the allocated funds, but during Phase IV the total funding requirements exceed the allocated funds, resulting in 38% potential over expenditure (Table 1-12 and Figure 1-8). Large total costs are required during Phase I and II by the projects in the institutional development subsector (Table 1-12 and Figure 1-9). This is due to the initial massive investment needed to develop the legal framework (including enforcement), and to develop institutional and human resources. In addition, high up-scaling costs of these projects are envisaged in Phases III and IV due to the continuing importance of the subsector; again funding requirements are expected to be higher than proposed funding allocations.

The estimated funds available under the peace dividend scenario are sufficient to meet the total funding requirements necessary for implementation of the CAMP investment plan. However, subsector fund allocations and total fund requirements will require adjustments during the course of CAMP implementation, based on the results of proper and periodical monitoring and evaluation exercises.

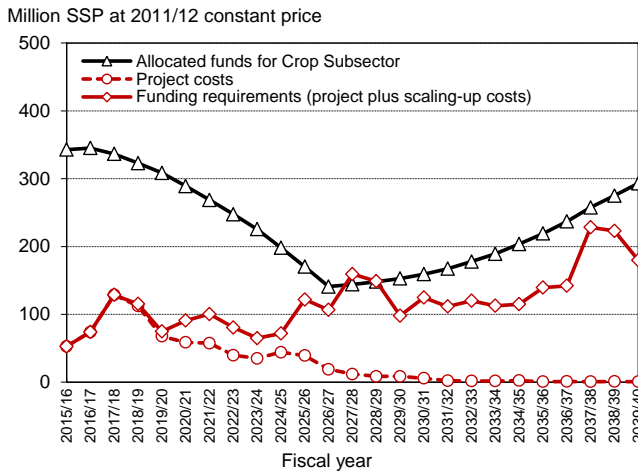
Table 1-12: Summary of funding allocation versus requirements of CAMP investment plan

(SSP/USD=4.00)

Ministries	Subsector	Allocated funds under Peace Dividend Scenario			Funding requirement of CAMP Investment Plan			Balance of funds (Allocated funds - funding requirement)		
		SSP Million a	USD Million b=a/4	% to total c	SSP Million d	USD Million e=d/4	% to total f	SSP Million g=a-d	USD Million h=b-e	Utilization rate i=d/a
MAFCRD and AB	Crop Subsector	5,821	1,455	42%	2,986	747	24%	2,835	709	51%
	Forestry Subsector	1,403	351	10%	1,877	469	15%	-474	-119	134%
MLFI	Livestock Subsector	3,241	810	23%	2,718	679	22%	523	131	84%
	Fisheries Subsector	1,166	292	8%	1,607	402	13%	-441	-110	138%
Both ministries	Institutional Development	2,195	549	16%	3,409	852	27%	-1,214	-304	155%
Total		13,826	3,456	100%	12,597	3,149	100%	1,228	307	91%

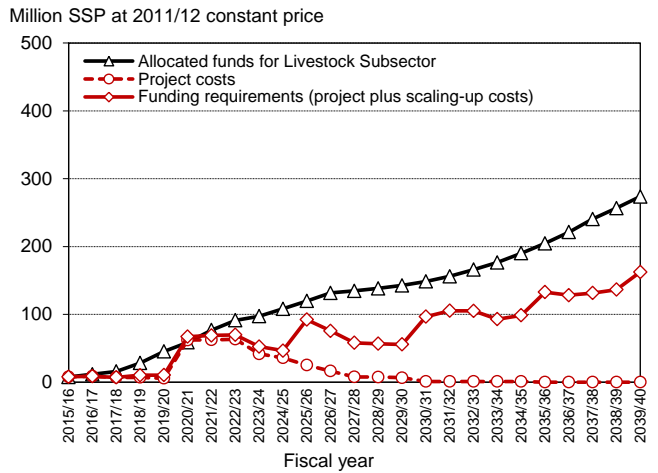
Source: CAMP TT

Figure 1-5: Funding allocation versus requirements for crop subsector projects



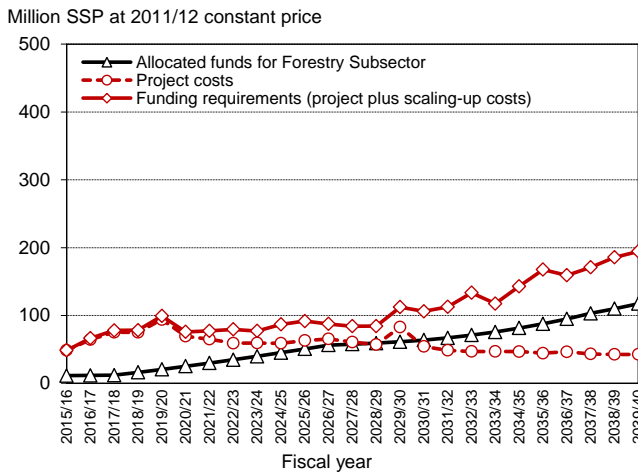
Source: CAMP TT

Figure 1-6: Funding allocation versus requirements for livestock subsector projects



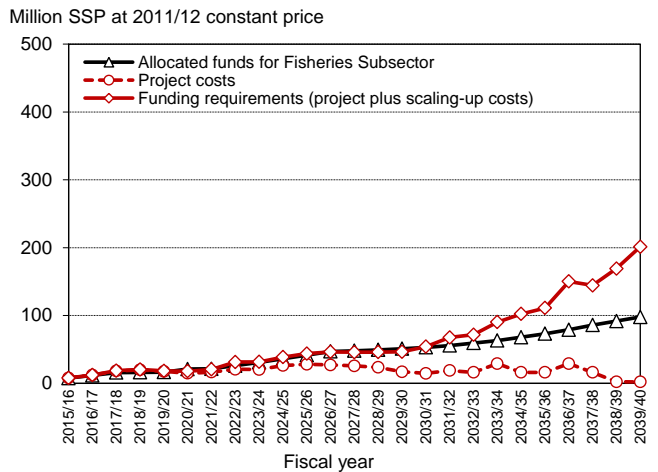
Source: CAMP TT

Figure 1-7: Funding allocation versus requirements for forestry subsector projects



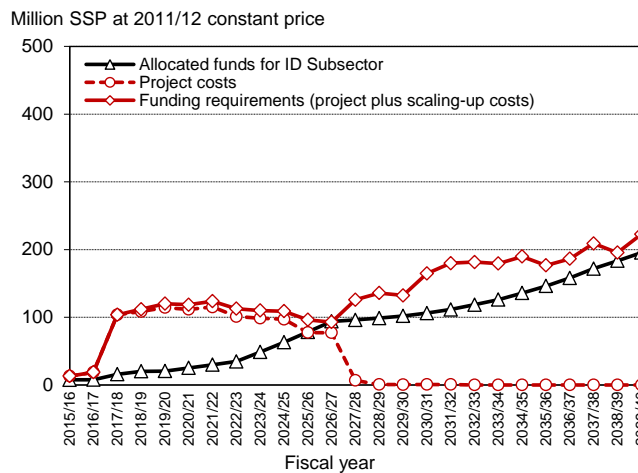
Source: CAMP TT

Figure 1-8: Funding allocation versus requirements for fisheries subsector projects



Source: CAMP TT

Figure 1-9: Funding allocation versus requirements for ID subsector projects



Note: ID: Institutional Development
Source: CAMP TT

2. Crop Subsector

2.1 Investment Planning Space

2.1.1 Investment Planning Space by Development Theme

Subsector	Development Theme Project ID Project name	Phase												Year	SSP (’000)	USD (’000)	Responsi- bility	
		Phase I 2015/16 2016/17 2017/18 2018/19 2019/20	Phase II 2020/21 2021/22 2022/23 2023/24 2024/25	Phase III 2025/26 2026/27 2027/28 2028/29 2029/30	Phase IV 2030/31 2031/32 2032/33 2033/34 2034/35 2035/36 2036/37 2037/38 2038/39 2039/40													
01 Crop Subsector																		
	T1 Reconstruction and recovery																	
	01.01 IDPs and returnees settlement/resettlement support project																	
	T2 Food and nutrition security																	
	01.02 Quality seed production project																	
	01.03 Subsistence farmer sorghum production project																	
	01.04 Subsistence farmer maize production project																	
	01.05 Subsistence farmer rice production project																	
	01.06 Subsistence farmer vegetable and fruit production project																	
	01.07 Subsistence farmer cassava production and value addition project																	
	01.08 Subsistence farmer peas and beans production project																	
	01.09 Subsistence farmer groundnut production and value addition project																	
	01.10 Enhancement of animal power utilisation project																	
	01.11 Promotion of integrated farming for risk reduction project																	
	01.12 Farmers organisation support project																	
	01.13 Promotion of market oriented farming project																	
	01.14 Farmers and pastoralists conflict resolution project																	
	01.15 Strengthening of extension service delivery project																	
	01.16 Strengthening and establishment of training institution infrastructure project																	
	T3 Economic growth and livelihood improvement																	
	01.17 Enhancement of private sector agro-input providers project																	
	01.18 Enhancement of tractor hire service providers project																	
	01.19 Tractor operator training project																	
	01.20 Urban and peri-urban vegetable production and marketing project																	
	01.21 Sesame production project																	
	01.22 Fruit and nut production project																	
	01.23 Development of research institution infrastructure project																	
	01.24 Development of research capacity project																	
	01.25 Extension system reform and efficient service delivery project																	
	01.26 Establishment and enhancement of national higher educational institutions for agriculture project																	
	01.27 Establishment and enhancement of agricultural vocational institutions project																	
	T4 Agriculture sector transformation																	
	01.28 Private sector investment project																	
	01.29 National crop pest and disease control project																	
	01.30 National phytosanitary infrastructure project																	
	01.31 Establishment of a national phytosanitary system project																	
	01.32 Quality standards and quality control for agricultural products project																	
	01.33 Tractor assembly plant establishment support project																	
	T5 Institutional development																	
	01.34 Establishment of firm legislative framework project																	
	01.35 Enhancement of laws and regulations enforcement project																	

Note: N: National government; S: State government; P: private sector
PPP: Public and private sector partnership

2.1.2 Investment Planning Space by CAADP Pillar

Subsector CAADP Pillar Project ID Project name	Phase												Year	SSP (’000)	USD (’000)	Respon- sibility
	Phase I 2015/16 2016/17 2017/18 2018/19 2019/20	Phase II 2020/21 2021/22 2022/23 2023/24 2024/25	Phase III 2025/26 2026/27 2027/28 2028/29 2029/30	Phase IV 2030/31 2031/32 2032/33 2033/34 2034/35 2036/36 2037/38 2038/39 2039/40												
01 Crop Subsector														776,599	194,150	
P1 Pillar 1: Land and water management														44,881	11,220	
01.01 IDPs and returnees settlement/resettlement support project													5	31,574	7,894	NS
01.14 Farmers and pastoralists conflict resolution project													10	13,307	3,327	NS/SC
P2 Pillar 2: Market access														184,244	46,061	
01.02 Quality seed production project													10	18,792	4,698	N
01.12 Farmers organisation support project													5	14,049	3,512	NS
01.13 Promotion of market oriented farming project													15	4,674	1,169	NS
01.17 Enhancement of private sector agro-input providers project													10	20,710	5,178	NS
01.19 Tractor operator training project													10	18,987	4,747	N
01.20 Urban and peri-urban vegetable production and marketing project													10	12,783	3,196	NS
01.21 Sesame production project													10	24,967	6,242	NS
01.22 Fruit and nut production project													10	16,431	4,108	NS
01.27 Establishment and enhancement of agricultural vocational institutions project													10	17,424	4,356	NS
01.28 Private sector investment project													0	8,818	2,204	P
01.32 Quality standards and quality control for agricultural products project													7	20,851	5,213	N
01.33 Tractor assembly plant establishment support project													0	5,758	1,440	P
P3 Pillar 3: Food supply and hunger														171,598	42,900	
01.03 Subsistence farmer sorghum production project													10	11,793	2,948	NS
01.04 Subsistence farmer maize production project													10	24,487	6,122	NS
01.05 Subsistence farmer rice production project													10	11,205	2,801	NS
01.06 Subsistence farmer vegetable and fruit production project													10	15,798	3,950	NS
01.07 Subsistence farmer cassava production and value addition project													10	18,100	4,525	NS
01.08 Subsistence farmer peas and beans production project													5	14,763	3,691	NS
01.09 Subsistence farmer groundnut production and value addition project													10	16,045	4,011	NS
01.10 Enhancement of animal power utilisation project													10	8,233	2,058	NS
01.11 Promotion of integrated farming for risk reduction project													5	21,693	5,423	NS
01.18 Enhancement of tractor hire service providers project													10	8,936	2,234	N
01.34 Establishment of firm legislative framework project													3	8,844	2,211	N
01.35 Enhancement of laws and regulations enforcement project													10	11,701	2,925	NS
P4 Pillar 4: Agricultural research														375,876	93,969	
01.15 Strengthening of extension service delivery project													10	30,612	7,653	NS
01.16 Strengthening and establishment of training institution infrastructure project													10	77,368	19,342	N
01.23 Development of research institution infrastructure project													10	58,956	14,739	N
01.24 Development of research capacity project													23	59,371	14,843	N
01.25 Extension system reform and efficient service delivery project													10	74,426	18,607	N
01.26 Establishment and enhancement of national higher educational institutions for agriculture project													10	37,865	9,466	N
01.29 National crop pest and disease control project													12	25,422	6,355	NS
01.30 National phytosanitary infrastructure project													2	6,041	1,510	N
01.31 Establishment of a national phytosanitary system project													4	5,815	1,454	N

Note: N: National government; S: State government; P: private sector
PPP: Public and private sector partnership

Public sector project
Routine work by government
Private sector project
Routine work by private sector

2.1.3 Investment Planning Space by Subsector Area/Programme

Subsector Subsector area/programme Project ID Project name	Phase												Year	SSP ('000)	USD ('000)	Responsibility			
	Phase I 2015/16 2016/17 2017/18 2018/19 2019/20 2020/21	Phase II 2021/22 2022/23 2023/24 2024/25 2025/26 2026/27 2027/28 2028/29 2029/30 2030/31	Phase III 2031/32 2032/33 2033/34 2034/35 2035/36 2036/37 2037/38 2038/39 2039/40																
01 Crop Subsector																			
Policy and legal framework development																			
01.34																	3	8,844	2,211 N
01.35																	10	11,701	2,925 NS
Public sector institution and management capacity development																			
01.15																	10	30,612	7,653 NS
01.16																	10	77,368	19,342 N
01.23																	10	58,956	14,739 N
01.24																	23	59,371	14,843 N
01.25																	10	74,426	18,607 N
01.26																	10	37,865	9,466 N
01.27																	10	17,424	4,356 NS
01.32																	7	20,851	5,213 N
Private sector projects and businesses																			
01.28																	0	8,818	2,204 P
Crop production																			
01.03																	10	11,793	2,948 NS
01.04																	10	24,487	6,122 NS
01.05																	10	11,205	2,801 NS
01.07																	10	18,100	4,525 NS
01.08																	5	14,763	3,691 NS
01.09																	10	16,045	4,011 NS
01.11																	5	21,693	5,423 NS
01.21																	10	24,967	6,242 NS
Horticultural crop production																			
01.06																	10	15,798	3,950 NS
01.13																	15	4,674	1,169 NS
01.20																	10	12,783	3,196 NS
01.22																	10	16,431	4,108 NS
Mechanisation and animal power																			
01.10																	10	8,233	2,058 NS
01.18																	10	8,936	2,234 N
01.19																	10	18,987	4,747 N
01.33																	0	5,758	1,440 P
Production, research and management																			
01.02																	10	18,792	4,698 N
01.17																	10	20,710	5,178 NS
01.29																	12	25,422	6,355 NS
01.30																	2	6,041	1,510 N
01.31																	4	5,815	1,454 N
Farmer and producer organisation																			
01.01																	5	31,574	7,894 NS
01.12																	5	14,049	3,512 NS
01.14																	10	13,307	3,327 NS/SC

Note: N: National government; S: State government; P: private sector
PPP: Public and private sector partnership

Public sector project
Routine work by government
Private sector project
Routine work by private sector

2.2 Summary of funding requirement

Subsector	SSP/USD = 4.00																													
	Phase I				Phase II				Phase III				Phase IV				SSP	USD												
Development Theme Project ID Project name	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	(million)	(million)			
01.10 Enhancement of animal power utilisation project	4.7	1.3	0.1	0.1	0.1	0.9	0.4	0.1	0.1	0.5	2.6	2.2	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.2	2.3	2.4	2.6	2.7	3.2	8.2	2.1			
Project cost																														
Scaling-up cost																														
Project total	4.7	1.3	0.1	0.1	0.1	0.9	0.4	0.1	0.1	0.5	2.6	2.2	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.2	2.3	2.4	2.6	2.7	3.2	8.2	2.1			
01.11 Promotion of integrated farming for risk reduction project	4.9	9.2	4.0	1.7	1.9	7.9	10.5	10.5	10.5	10.5	10.5	9.2	7.9	7.9	7.9	7.9	7.9	8.1	8.4	8.9	9.4	10.0	10.5	11.0	13.1	188.1	47.0			
Project cost																														
Scaling-up cost																														
Project total	4.9	9.2	4.0	1.7	1.9	7.9	10.5	10.5	10.5	10.5	10.5	9.2	7.9	7.9	7.9	7.9	7.9	8.1	8.4	8.9	9.4	10.0	10.5	11.0	13.1	209.8	52.5			
01.12 Farmers organisation support project	2.3	4.0	2.4	1.9	3.5	2.5	3.4	3.4	3.4	3.4	3.4	3.0	2.5	2.5	2.5	2.5	2.5	2.6	2.7	2.9	3.0	3.2	3.4	3.6	4.2	14.0	3.5			
Project cost																														
Scaling-up cost																														
Project total	2.3	4.0	2.4	1.9	3.5	2.5	3.4	3.4	3.4	3.4	3.4	3.0	2.5	2.5	2.5	2.5	2.5	2.6	2.7	2.9	3.0	3.2	3.4	3.6	4.2	14.0	3.5			
01.13 Promotion of market oriented farming project	1.0	0.4	0.4	0.1	0.1	0.1	0.2	0.5	0.5	0.5	0.1	0.1	0.2	0.5	0.5	0.1	0.1	0.2	0.5	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	4.7	1.2	
Project cost																														
Scaling-up cost																														
Project total	1.0	0.4	0.4	0.1	0.1	0.1	0.2	0.5	0.5	0.5	0.1	0.1	0.2	0.5	0.5	0.1	0.1	0.2	0.5	0.5	0.1	0.1	0.1	0.1	0.1	4.7	1.2			
01.14 Farmers and pastoralists conflict resolution project	5.1	3.8	1.9	1.1	0.0	1.1	0.0	1.1	0.0	0.0	5.8	2.5	2.5	2.5	2.5	5.8	2.5	2.6	6.2	2.9	3.0	3.2	7.7	3.5	4.2	13.3	3.3			
Project cost																														
Scaling-up cost																														
Project total	5.1	3.8	1.9	1.1	0.0	1.1	0.0	1.1	0.0	0.0	5.8	2.5	2.5	2.5	2.5	5.8	2.5	2.6	6.2	2.9	3.0	3.2	7.7	3.5	4.2	13.3	3.3			
01.15 Strengthening of extension service delivery project	3.1	4.6	3.6	3.0	1.0	3.1	4.6	3.6	3.0	1.0	2.3	4.6	4.6	4.6	4.6	2.0	2.0	4.8	4.9	5.3	2.4	2.5	6.2	6.5	7.7	30.6	7.7			
Project cost																														
Scaling-up cost																														
Project total	3.1	4.6	3.6	3.0	1.0	3.1	4.6	3.6	3.0	1.0	2.3	4.6	4.6	4.6	4.6	2.0	2.0	4.8	4.9	5.3	2.4	2.5	6.2	6.5	7.7	30.6	7.7			
01.16 Strengthening and establishment of training in institution infrastructure project	3.76	34.1	3.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	51.2	47.3	1.4	1.4	1.4	1.4	1.4	1.5	1.5	1.6	1.7	1.8	68.2	66.2	2.4	247.9	62.0			
Project cost																														
Scaling-up cost																														
Project total	3.76	34.1	3.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	51.2	47.3	1.4	1.4	1.4	1.4	1.4	1.5	1.5	1.6	1.7	1.8	68.2	66.2	2.4	247.9	62.0			
T3 Economic growth and livelihood improvement	2.6	30.9	46.9	36.6	44.2	37.4	25.3	20.4	27.4	32.0	14.0	6.4	5.5	4.3	5.0	5.0	1.5	1.7	1.7	2.4	0.8	1.1	0.8	1.1	0.8	350.9	87.7			
Project cost																														
Scaling-up cost																														
Theme total	2.6	30.9	46.9	36.6	44.2	37.4	25.3	20.4	27.4	32.0	14.0	6.4	5.5	4.3	5.0	5.0	1.5	1.7	1.7	2.4	0.8	1.1	0.8	1.1	0.8	350.9	87.7			
01.17 Enhancement of private sector agro-input providers project	3.4	2.2	4.2	3.1	0.9	1.5	0.9	1.5	0.9	1.5	0.9	2.1	3.0	3.0	3.0	3.0	3.0	3.1	3.2	3.4	3.6	3.8	4.0	4.2	4.9	20.7	5.2			
Project cost																														
Scaling-up cost																														
Project total	3.4	2.2	4.2	3.1	0.9	1.5	0.9	1.5	0.9	1.5	0.9	2.1	3.0	3.0	3.0	3.0	3.0	3.1	3.2	3.4	3.6	3.8	4.0	4.2	4.9	20.7	5.2			
01.18 Enhancement of tractor hire service providers project	3.8	3.0	0.5	0.1	0.1	0.6	0.1	0.1	0.1	0.1	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.8	1.9	2.0	2.2	2.3	2.7	24.4	6.1			
Project cost																														
Scaling-up cost																														
Project total	3.8	3.0	0.5	0.1	0.1	0.6	0.1	0.1	0.1	0.1	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.8	1.9	2.0	2.2	2.3	2.7	24.4	6.1			
01.19 Tractor operator training project	3.5	8.1	2.9	1.7	0.5	0.5	0.5	0.3	0.3	0.4	2.3	8.3	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.3	1.4	1.4	3.1	11.7	1.9	37.3	9.3			
Project cost																														
Scaling-up cost																														
Project total	3.5	8.1	2.9	1.7	0.5	0.5	0.5	0.3	0.3	0.4	2.3	8.3	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.3	1.4	1.4	3.1	11.7	1.9	37.3	9.3			
01.20 Urban and peri-urban vegetable production and marketing project	3.7	2.9	2.1	0.5	0.0	0.0	1.7	1.2	0.4	0.2	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.8	1.9	2.0	2.2	2.3	2.7	12.8	3.2			
Project cost																														
Scaling-up cost																														
Project total	3.7	2.9	2.1	0.5	0.0	0.0	1.7	1.2	0.4	0.2	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.8	1.9	2.0	2.2	2.3	2.7	12.8	3.2			
01.21 Sesame production project	5.4	6.9	3.5	1.9	1.5	0.6	3.5	0.5	0.5	0.7	4.9	4.9	5.1	5.2	5.6	4.9	4.9	5.1	5.2	5.6	5.9	6.2	6.5	6.9	8.2	25.0	6.2			
Project cost																														
Scaling-up cost																														
Project total	5.4	6.9	3.5	1.9	1.5	0.6	3.5	0.5	0.5	0.7	4.9	4.9	5.1	5.2	5.6	4.9	4.9	5.1	5.2	5.6	5.9	6.2	6.5	6.9	8.2	25.0	6.2			

Subsector Development Theme Project ID Project name	Phase I 15/16 16/17 17/18 18/19 19/20	Phase II 20/21 21/22 22/23 23/24 24/25	Phase III 25/26 26/27 27/28 28/29 29/30	SSP/USD = 4.00											
				Phase IV				SSP (million)	USD (million)						
				30/31	31/32	32/33	33/34 34/35 35/36 36/37 37/38 38/39 39/40								
01.22 Fruit and nut production project	Project cost				5.2	2.5	0.9	0.6	0.6	3.7	0.5	0.5	1.3	16.4	4.1
	Scaling-up cost														
	Project total				5.2	2.5	0.9	0.6	0.6	3.7	0.5	0.5	1.3	34.5	8.6
01.23 Development of research institution infrastructure project	Project cost														
	Scaling-up cost														
	Project total														
01.24 Development of research capacity project	Project cost														
	Scaling-up cost														
	Project total														
01.25 Extension system reform and efficient service delivery project	Project cost														
	Scaling-up cost														
	Project total														
01.26 Establishment and enhancement of national higher educational institutions for agriculture project	Project cost														
	Scaling-up cost														
	Project total														
01.27 Establishment and enhancement of agricultural vocational institutions project	Project cost														
	Scaling-up cost														
	Project total														
T4 Agriculture sector transformation	Project cost														
	Scaling-up cost														
	Theme total														
01.28 Private sector investment project	Project cost														
	Scaling-up cost														
	Project total														
01.29 National crop pest and disease control project	Project cost														
	Scaling-up cost														
	Project total														
01.30 National phytosanitary infrastructure project	Project cost														
	Scaling-up cost														
	Project total														
01.31 Establishment of a national phytosanitary system project	Project cost														
	Scaling-up cost														
	Project total														
01.32 Quality standards and quality control for agricultural products project	Project cost														
	Scaling-up cost														
	Project total														
01.33 Tractor assembly plant establishment support project	Project cost														
	Scaling-up cost														
	Project total														

SSP/USD = 4.00

Subsector	Development Theme	Project ID	Project name	Phase I			Phase II			Phase III			Phase IV			SSP	USD												
				15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	(million)
T5	<u>Institutional development</u>			3.0	5.8	7.2	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6													20.5	5.1
	Project cost			1.7	2.6																							125.3	31.3
	Scaling-up cost			3.0	5.8	7.2	5.5	2.6	2.6	3.5	3.5	3.5	3.5	4.0	7.3	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	145.8	36.5
	Theme total			3.0	3.0	2.9																						8.8	2.2
01.34	Establishment of firm legislative framework project			3.0	3.0	2.9	1.7	2.6	2.6	3.4	3.4	3.4	3.4	3.4	3.0	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	65.9	16.5
	Project cost			2.8	4.3	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6														11.7	2.9
	Scaling-up cost			2.8	4.3	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	4.3	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	59.4	14.9
	Project total			2.8	4.3	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	4.3	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	71.1	17.8
01.35	Enhancement of laws and regulations enforcement project			2.8	4.3	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	4.3	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	71.1	17.8
	Project cost			2.8	4.3	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	4.3	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	11.7	2.9
	Scaling-up cost			2.8	4.3	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	4.3	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	59.4	14.9
	Project total			2.8	4.3	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	4.3	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	71.1	17.8

2.3 Project Location Map

Nation-wide Projects

- 01.01 IDPs and returnees settlement/resettlement support project
- 01.02 Quality seed production project
- 01.03 Subsistence farmer sorghum production project
- 01.06 Subsistence farmer vegetable and fruit production project
- 01.10 Enhancement of animal power utilisation project
- 01.11 Promotion of integrated farming for risk reduction project
- 01.12 Farmers organisation support project
- 01.13 Promotion of market oriented farming project
- 01.14 Farmers and pastoralists conflict resolution project
- 01.15 Strengthening of extension service delivery project
- 01.17 Enhancement of private sector agro-input providers project
- 01.18 Enhancement of tractor hire service providers project
- 01.19 Tractor operator training project
- 01.20 Urban and peri-urban vegetable production and marketing project
- 01.21 Sesame production project
- 01.22 Fruit and nut production project
- 01.24 Development of research capacity project
- 01.25 Extension system reform and efficient service delivery project
- 01.28 Private sector investment project
- 01.29 National crop pest and disease control project
- 01.30 National phytosanitary infrastructure project
- 01.31 Establishment of a national phytosanitary system project
- 01.32 Quality standards and quality control for agricultural products project
- 01.34 Establishment of firm legislative framework project
- 01.35 Enhancement of laws and regulations enforcement project

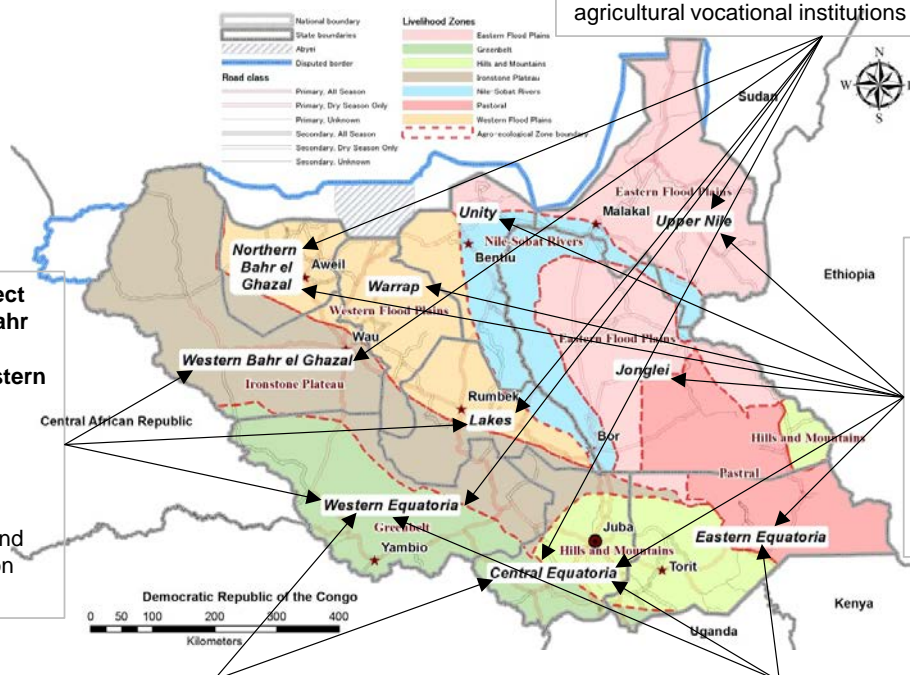
States Project (Upper Nile, Northern Bahr el Ghazal, Western Bahr el Ghazal, Lakes, Western Equatoria, Central Equatoria)
01.27 Establishment and enhancement of agricultural vocational institutions project

States Project (Western Bahr el Ghazal, Lakes, Western Equatoria)
01.09 Subsistence farmer groundnut production and value addition project

States Project (Upper Nile, Jonglei, Unity, Warrap, Northern Bahr el Ghazal, Central Equatoria, Eastern Equatoria)
01.05 Subsistence farmer rice production project

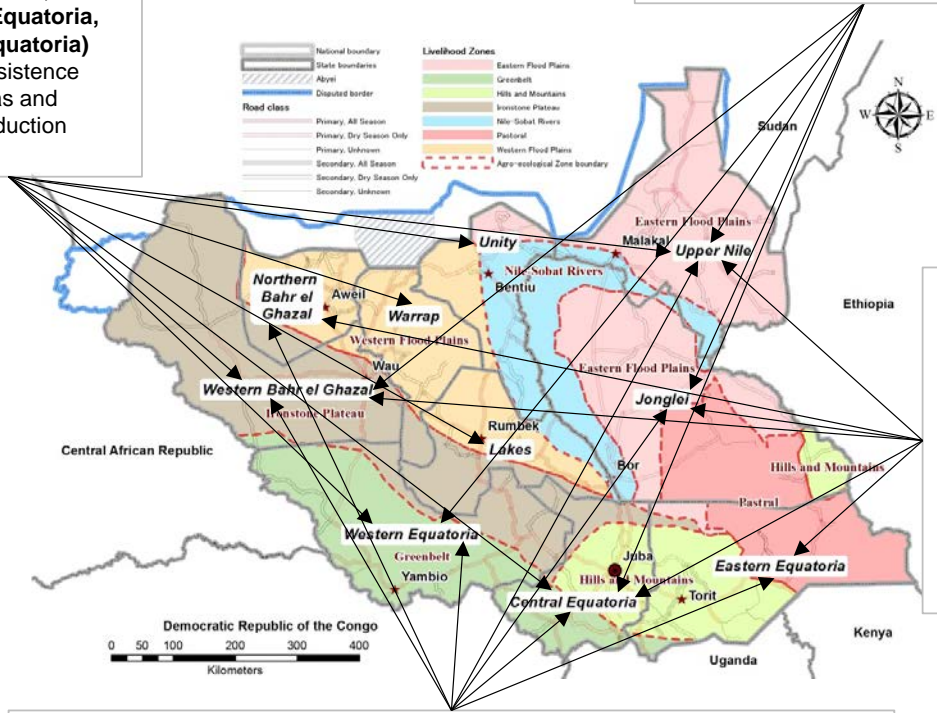
States Project (Western Equatoria, Central Equatoria)
01.07 Subsistence farmer cassava production and value addition project

States Project (Western Equatoria, Central Equatoria, Eastern Equatoria)
01.04 Subsistence farmer maize production project



States Project (Upper Nile, Unity, Warrap, Western Bahr el Ghazal, Lakes, Western Equatoria, Central Equatoria)
01.08 Subsistence farmer peas and beans production project

States Project (Upper Nile, Jonglei, Western Bahr el Ghazal, Western Equatoria, Central Equatoria)
01.26 Establishment and enhancement of national higher educational institutions for agriculture project



States Project (Upper Nile, Jonglei, Northern Bahr el Ghazal, Western Bahr el Ghazal, Central Equatoria, Eastern Equatoria)
01.33 Tractor assembly plant establishment support project

States Projects (Upper Nile, Jonglei, Northern Bahr el Ghazal, Western Bahr el Ghazal, Western Equatoria, Central Equatoria, Eastern Equatoria)
01.16 Strengthening and establishment of training institution infrastructure project
01.23 Development of research institution infrastructure project

2.4 Project Profiles

2.4.1 IDPs and returnees resettlement support project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector	Crop		
(2) Project name:	IDPs and returnees resettlement support project		
(3) Project ID:	01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2015/16	Ending FY: 2019/20	Duration (years): 5
(5) Total investment:	SSP 31,574,000	USD 7,894,000	Note: Not including recurrent cost

1.2 Project characteristics: (to be selected from Tables in Reference Book)

	Code	Abbreviation	Description	Reference
(1) Subsector area:		CR.SA11	Production resource management	Table 2-3
(2) Government organisation:	12	MAF-PE	Directorate of Agriculture Production and Extension Service	Table 2-6
	13	MAF-AE	Directorate of Planning and Agriculture Economics	Table 2-6
(3) Activity types:	203	SP-EX	Service delivery/infra. Dev.-Extension and training	Table 2-12
	207	SP-PL	Service delivery/infra. Dev.-Granting permissions and licences	Table 2-12

1.3 Project characteristics: (to be selected from the items below)

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	X
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	X
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	X
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/15-2020/21, 5 years)	X
	02	PH2	Phase II (2020/21-2025/26, 5 years)	
	03	PH3	Phase III (2025/26-2030/31, 5 years)	
	04	PH4	Phase IV (2030/31-2040/41, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>Since the outbreak of conflicts in Juba in December 2013, South Sudan has been facing serious challenges including insecurity, displacement of people, food shortages, outbreaks of disease and seasonal floods.</p> <p>According to UNOCHA and UNHCR⁶, over 1.5 million people became displaced from their homes from December 2013 to June 2014, including over 400,000 people who fled to neighbouring countries such as Uganda, Kenya, Ethiopia and Sudan. Inside South Sudan, internally displaced persons (IDP) were scattered over 186 locations and the number of people who fled to 8 UNMISS bases (i.e. Tomping and UN house in Juba, Bor, Malakal, Bentiu, Wau, Melut, Nasser and Rumbek) was over 100,000. Displacement patterns are fluid and many IDPs were forced to flee several times. The influx of IDPs often overwhelms host communities, leading to tensions and further movements. Tens of thousands of people sought shelter on small islands to protect themselves from attack without access to basic services. Most other displaced people were scattered in rural areas with limited information available on their living conditions.</p> <p>Agriculture is the main source of livelihood for IDPs and returnees from neighbouring countries as well as the local residents already in South Sudan. Food security has worsened due to the combination of widespread insecurity, low agricultural production and sharp increases in the price of agricultural commodities. In order to accelerate the resettlement of IDPs and returnees, technical assistance and input support for farming are important; producing more food crops contributes to improving their food security and livelihoods in their areas of resettlement. Simultaneously, people in the host communities of IDPs and returnees need to be supported, since integration and peaceful coexistence between IDPs/returnees and host communities are crucial for success in the resettlement process. Thus, the project will target IDPs and returnees as well as farmers in host communities.</p>
(2) Objectives:	<p>This project aims to support the resettlement of the target IDPs and returnees and to facilitate their integration into host communities through providing technical and input support for farming. In addition, the project aims to improve the livelihood and nutritional status of the target IDPs and returnees, and host communities by producing more food crops.</p>
(3) Overall description including temporal and spatial extent of project:	<p>The project focuses on the IDPs and returnees and their host communities. 50,000 selected IDPs and returnees and 10,000 farmers from their host communities will be targeted.</p> <p>Necessary technical support for farming and inputs and simple tools will be provided to target beneficiaries by government agricultural extension officers (AEOs), and staff of NGOs. To accelerate integration and peaceful coexistence with host communities, joint action plans between IDPs/returnees and host communities will be prepared. Regular meetings between IDPs/returnees and host communities will be facilitated where progress and issues of the project activities will be shared.</p> <p>Before starting the project activities, a social assessment and baseline surveys will be conducted to understand the social aspects in target areas (e.g. relationship between IDPs/returnees and host communities and among IDPs/returnees, tribal conflicts, land tenure, gender disparity, youth, HIV, etc.) and agriculture production potential (e.g. suitable crops, soil conditions, water availability, pests and diseases, appropriate agricultural practices and marketing).</p> <p>By referring to the surveys' results, target crops will be selected in a participatory manner by target IDPs/returnees and farmers from host communities. And then training contents will be discussed and determined. Training courses should be tailored taking into account their socio economic situation and available natural resources for farming.</p> <p>The project will focus on areas where IDPs/returnees have already resettled and can get access to land for farming. The project duration is 5 years.</p> <p>Special attention will be paid to ensure equal/equitable participation, contribution and benefit by both women and men at all levels of the project; this might include affirmative action where necessary. Project reporting, monitoring and evaluation will include gender</p>

⁶ South Sudan Crisis Situation Report, 3 July 2014, UNOCHA
South Sudan Refugee Situation, 23-27 June 2014, UNHCR

Items	Information
(4) Component structure:	<p>disaggregated data as well as gender specific results. The project will also pay special attention to young farmers' participation.</p> <p>Component 1: Enhancement of coordination between the national and state governments Component 2: Selection of target IDPs and returnees and their host communities Component 3: Provision of technical support and necessary inputs for target IDPs/refugees and host communities Component 4: Provision of periodic follow-up</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1: Enhancement of coordination between the national and state governments</p> <p>Activity 1.1: Establish a regular (monthly) information sharing system on resettlement status of IDPs and returnees between national and state governments in collaboration with other stakeholders (e.g. UNOCHA, IOM, WFP, related NGOs, etc.)</p> <p>Activity 1.2: Hold regular (monthly) meetings at national and state levels</p> <p>Activity 1.3: Identify needs of IDPs and returnees, especially for agricultural technical support to accelerate their resettlement (e.g. agriculture production skills, use of agricultural inputs and simple tools, post-harvest handling and storing, knowledge of nutrition and hygiene, etc.)</p> <p>Activity 1.4: Identify measures to address their needs (e.g. technical training and provision of inputs)</p> <p>Outputs: an information sharing system established, regular meetings held at both national and state levels, needs of IDPs and returnees identified and measures to address the needs identified</p> <p>Component 2: Selection of target IDPs and returnees and their host communities</p> <p>Activity 2.1: Conduct social assessment in target areas (e.g. conditions of IDPs/returnees and host communities, land tenure of IDPs/returnees, tension between IDPs/returnees and host communities, conflicts among IDPs/returnees, tribal conflicts, conflicts between farmers and livestock keepers, gender disparity, youth, HIV, etc.) and surveys on agricultural production potential (e.g. suitable crops, soil conditions, water availability, pest and diseases, agricultural practices and marketing)</p> <p>Activity 2.2: Select target IDPs and returnees and their host communities in accordance with selection criteria developed by stakeholders based on social assessment (with a special focus on youth and gender) and agricultural potential survey</p> <p>Activity 2.3: Conduct baseline survey on target IDPs and returnees and their host communities (e.g. land tenure, production capacities, farming activities, gender disparity, economic status, etc.)</p> <p>Activity 2.4: Hold meetings with beneficiaries (i.e. IDPs and returnees and farmers from their host communities) to raise awareness on IDPs/returnees integration and have consensus with project approaches and obligations of beneficiaries</p> <p>Outputs: 50,000 IDPs/returnees (about 25,000 females and 25,000 males) and 10,000 farmers (about 5,000 females and 5,000 males) from host communities selected, baseline survey reports clarifying present conditions; 500 meetings held and project buy in achieved</p> <p>Component 3: Provision of technical support and necessary inputs for target IDPs/refugees and host communities</p> <p>Activity 3.1: Conduct training for AEOs and NGO staff on social considerations and basic farming practices (e.g. basic knowledge of social considerations, conflict resolution and gender, facilitation skills, simple methods of planting, weeding, watering, fertiliser use, pest and disease control, post-harvest handling, and marketing)</p> <p>Activity 3.2: Conduct consultations with the beneficiaries to develop their action plans during the project period (target IDPs/refugees and host communities will work together to prepare action plans) and select target crops</p> <p>Activity 3.2: Hold meetings with the beneficiaries and stakeholders (e.g. state governments, UN agencies, local NGOs, etc.) to share planned activities with them</p> <p>Activity 3.3: Conduct technical training for the beneficiaries by AEOs and NGO staff to disseminate appropriate agriculture production skills on target crops</p> <p>Activity 3.4: Distribute necessary inputs for the beneficiaries (e.g. improved seeds and fertiliser for IDPs/returnees and host communities, and simple tools for IDPs/returnees)</p> <p>Activity 3.5: Hold regular meetings among the beneficiaries to share achievements and issues so as to accelerate peaceful coexistence between IDPs/returnees and host communities</p>
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Items	Information
	<p>Outputs: 200 extension agents able to assist farmers, 60,000 farmers trained and able to improve productivity, fertiliser and simple tools distributed, regular meetings held</p> <p>Component 4: Provision of periodic follow-up Activity 4.1: Conduct periodic follow-up by AEOs and NGO staff Activity 4.2: Facilitate integration of IDPs/returnees and host communities, by AEOs and NGO staff Activity 4.3: Carry out end of project survey on improvement of the beneficiaries (IDPs, returnees and host communities) Outputs: 60,000 farmers followed-up, survey reports prepared showing impact of project</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<p>200 extension agents (e.g. AEOs and NGO staff) State government officers working for IDPs and returnees Some international and local consultants Staff of government training and research institutes Staff of UN agencies (e.g. UNOCHA, IOM and WFP)</p>
(2) Description of beneficiaries within the framework of the project:	<p>Female and male IDPs and returnees and female and male farmers from their host communities and AEOs</p>

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<p>By starting to farm in resettled areas, most of the target IDPs and returnees will improve their livelihood and household food self-sufficiency. Also host communities will benefit through the project activities which will be conducted together with the target IDPs and returnees. This situation will accelerate integration and will greatly contribute to the resettlement process. In addition, through improved diet and better hygiene, the beneficiaries' nutrition and health will be improved. These benefits will be shared fairly among the household members (e.g. adults female and male, and children).</p>
(2) EIRR and/or FIRR, and/or other economic analysis:	<p>(if applicable)</p>

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: b</td> <td rowspan="2"> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> <tr> <td>Positive: c</td> </tr> </table>	Negative: b	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society	Positive: c
Negative: b	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society			
Positive: c				
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> A negative social impact might be observed if there are conflicts between the target IDPs/returnees and their host communities or among the IDPs/returnees. Especially, land tenure might become a sensitive issue if proper coordination with leaders of host communities is not made by stakeholders (e.g. national and state governments, UN agencies and concerned NGOs). Selection of the beneficiaries is also crucial. If equality and fairness cannot be maintained, serious negative impacts would be observed. <p>(Positive)</p> <ul style="list-style-type: none"> The social impact of the project will be mainly positive if the above issues are handled properly. Producing staple food and other crops will contribute significantly to improve livelihoods and food security of target IDPs/returnees and farmers from host communities. Appropriate target IDPs/returnees should be selected with gender considerations by following selection criteria set by stakeholders. To maintain transparency, selection criteria should be determined very carefully with stakeholders including local community leaders. This is a key point of the project. 			

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> Number of IDPs/returnees resettled Number of IDPs/returnees engaged in farming Number of people in host communities who are willing to accept IDPs/returnees in their communities Number of conflicts related to resettlement of IDPs/returnees
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> Increased number of IDPs/returnees engaged in farming Increased number of people in host communities who are willing to accept IDPs/returnees in their communities Farming income of IDPs/returnees engaged in farming Number of female and male beneficiaries trained Number of conflicts related to resettlement of IDPs/returnees
(3) Methods of measurement and	<p>Baseline and end of project surveys, CFSAM data, NBS census data, data from UN</p>

Items	Information					
sources of information: (4) Responsible parties for the monitoring and evaluation:	agencies MAFCRD (Directorate of Agriculture Production and Extension Services) in collaboration with state Ministry of Agriculture will be responsible for monitoring and evaluation as well as UN agencies working on resettlement. The beneficiaries and extension workers will also work together to conduct self-evaluations.					
2.7 Required human resources						
(1) Principle of human resources management:	The government does not need to increase the number of government extension officers but will try to improve their efficiency of service delivery, by providing technical training as well as improving practical skills to work with gender and conflict resolution issues. The government should mainly focus on facilitation to create a better environment for resettlement by involving local chiefs and leaders.					
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> • Project manager (one Director or Deputy Director) • Project staff at national level (senior inspector level, 2 staff) for project management, procurement, logistics, monitoring • Project staff at state level (three in-charge for each target state, total 30 staff) • Extension agents (e.g. AEOs and NGO staff) (about 200 staff) 					
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	Consultants in the field of: 1. One project management (Master degree, 15-years experience) 2. One crop husbandry/extension expert (BSc or BA, 5-years experience) 3. One conflict resolution expert (BSc, 5-years experience) 4. One social consideration (including gender) expert (BSc or BA, 5-years experience) Local consultants for baseline and end of project surveys will be hired. Local chiefs and leaders will be involved to facilitate resettlement.					
2.8 Risk assessment with respect to project objectives and resources to be applied						
(1) Expected level of risk:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; text-align: center;">M</td> <td style="width: 25%; text-align: center;">L: Low</td> <td style="width: 25%; text-align: center;">M: Medium</td> <td style="width: 25%; text-align: center;">H: High</td> <td style="text-align: right;">(select an indicator from the list)</td> </tr> </table>	M	L: Low	M: Medium	H: High	(select an indicator from the list)
M	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks	Expected risk level might be medium due to the following reasons. <ul style="list-style-type: none"> • Conflicts or tensions among beneficiaries (IDPs/returnees and farmers from host communities), and between beneficiaries and non-beneficiaries • Insecurity of rural areas, especially ethnic conflicts • Unfavourable conditions of access roads to reach beneficiaries • Gender disparity (negative cultural and customary practices) • Delay of input delivery due to inappropriate timing of budget disbursement and limited number of extension staff who deliver inputs • Limited capacity of AEOs and NGO staff and limited means of transport • Natural disasters (e.g. drought, flooding, bird pests, locusts and diseases) • Manmade disasters (e.g. insecurity, raiding, and ethnic conflicts) 					
2.9 Other special considerations and/or notes						
(1) Other special considerations and/or notes:	Selection of appropriate beneficiaries is one of the most sensitive parts of this project. Selection criteria should be discussed and decided with stakeholders including local chiefs and leaders in advance and the selection process should be transparent both for beneficiaries and stakeholders. Gender balance should also be considered for the selection. An intensive social assessment should be conducted to identify the situation of target beneficiaries and locations. Frequent consultations with local chiefs and leaders are very important to avoid conflicts among beneficiaries and ease tension between beneficiaries and non-beneficiaries.					
2.10 Routine operation and required resources after the completion of the project						
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	Continuous support is needed for the targeted farmers by state government staff, extension agents and staff of UN agencies. If extension agents are government officers, the follow-up activities will be done by them as routine work with minimum cost (fuel for motorbike and some inputs). If extension agents are NGO officers, salary and necessary costs would be required.					

Part 3: Project cost estimation

Project duration	SSP/USD = 4.00												Total														
	Phase 1			Phase 2			Phase 3			Phase 4				Total													
Cost group	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD	% to total
1 Management and operation of project																											
1 Deployment of government staff																											
1 Regular meetings at state capital (national staff per diem)	3,897	1,900	1,765	1,720	2,492																						
2 Regular meetings at state capital (national staff transportation)	223	223	223	223	223																						
3 Regular meetings, state staff (transportation)	36	36	36	36	36																						
2 Procurement of administrative services (contracted)	166	166	166	166	166																						
3 Procurement of professional services (contracted)																											
1 International consultant (project manager)	2,501	1,631	1,496	1,496	2,231																						
2 International consultant (crop husbandry/extension)	540	270	135	135	270																						
3 International consultant (conflict resolution)	454	454	454	454	454																						
4 International consultant (social consideration)	454	454	454	454	454																						
5 Local consultant (baseline and end line survey)	600				600																						
4 Implementation of staff training	1,020																										
1 Training for 200 extension agents (per diem)	840																										
2 Training for 200 extension agents (transportation)	180																										
5 Implementation of research, studies and surveys																											
6 Delivery of extension and training services to the private sector																											
7 Operation and maintenance	153	46	46	1	38																						
1 Fuels for baseline survey by extension agents	108																										
2 Fuels for field training for 60,000 farmers	45				45																						
3 Fuels for follow up by extension agents		1	1	1	1																						
4 Fuels for end line survey by extension agents					38																						
2 Construction of infrastructure and procurement of equipment																											
1 Construction of office buildings																											
2 Construction of research, training and other specialized buildings																											
3 Construction of feeder roads																											
4 Construction of production, market and transportation facilities																											
5 Acquisition of land																											
6 Procurement of vehicles																											
7 Procurement of equipment																											
3 Subsidies, equity and loans	6,600	6,600	6,600	6,600																							
1 Provision of cash and/or in-kind subsidies	6,600	6,600	6,600	6,600																							
1 improved seeds (4 crops) for 60,000 farmers	3,200	3,200	3,200	3,200																							
2 fertilizer for 60,000 farmers	1,000	1,000	1,000	1,000																							
3 agricultural tools for 60,000 farmers	2,400	2,400	2,400	2,400																							
2 Provision of training services to the private sector																											
3 Equity investments																											
4 Provision of loans																											
5 Social assistance/donation (Emergency)																											
Total (SSP '000)	10,497	8,500	8,365	1,720	2,492																						
Total (USD '000)	2,624	2,125	2,091	430	623																						
% to total	33%	27%	26%	5%	8%																						

Public sector project
Private sector project
Routine work by government
Routine work by private sector

2.4.2 Quality seed production project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Crop		
(2) Project name:	Quality seed production project		
(3) Project ID:	0 1 0 2 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2015/16	Ending FY: 2024/25	Duration (years): 10
(5) Total investment:	SSP 18,792,000	USD 4,698,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:	CR.SA8		Agricultural inputs	Table 2-3
(2) Government organisation :	09	MAF-PE	Directorate of Agriculture Production and Extension Services	Table 2-6
	02	MAF-RE	Directorate of Research	Table 2-6
(3) Activity types :	204	SP-RE	Service delivery and infrastructure development - Research and experiment	Table 2-12
	301	PS-PR	Private sector - Production	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	X
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	X
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

Although South Sudan is one of the richest countries in Africa in terms of natural resources, and has great potential for sustainable agricultural development, there is a high incidence of poverty, food insecurity and malnutrition. Low productivity levels prevent South Sudanese farmers from achieving higher yields; this can partially be attributed to the unavailability of quality seed. South Sudan lacks an efficient seed production and distribution system.

The focus will not only be on establishing structures able to provide clean, drought and pest and disease resistant or tolerant varieties of the most common seeds (for staples such as maize), but also to provide biofortified seed to increase nutritional value, and high-quality seed for horticultural products. The aim is to provide access to quality seed of superior varieties, both improved and local, by recognising both informal and formal seed systems. A flourishing seed sector, centred on small farmers will bring huge benefits to agricultural development and farmers' livelihoods.

A long-term objective of the project is to make commercial seed accessible to all farmers, including poor and marginalized farmers. However, a commercial seed sector can only function long-term if the purchasing power of farmers increases. Training them to improve their plant breeding and seed and propagation material production will - over time - enable them to produce those surpluses needed to generate sufficient extra income to pay for commercially produced seed.

More formal methods of producing seed and propagation material consist of diverse commercial services which may include variety breeding, variety registration, propagation, certification and trading. Commercial plant breeding systems like these are more efficient and improve varieties faster. The seed is usually dressed (treated), which ensures that the vast majority of seed actually germinate. Quality control checks and certification help to maintain higher levels of varietal purity in commercial, as opposed to locally produced, seed.

In this situation, however, ownership of the varieties is usually privatised as the knowledge stems from the seed companies' own R&D efforts. This is different in the case of South Sudan. The very few existing seed companies are not engaged in research, but rely exclusively on parastatal research institutions. In the short- and medium-term it cannot be expected that the investment needed to establish private sector research departments will be available. This is beneficial for South Sudan's small farmers as property rights will remain in the public domain. Hence, the focus of this project will be on strengthening and initiating linkages between existing and prospective national government research centres and regional and international research institutes such as the Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA), the Private Agriculture Sector Support (PASS), and International Centre for Tropical Agriculture (CIAT) and existing and new seed companies.

On a macro level, the Directorate of Agricultural Production and Extension Services at MAFCRD needs to be strengthened to be able to take charge of seed company licensing, variety release and cataloguing; import and export regulations; and seed quality assurance. South Sudan developed a Seed Policy in 2011, but a Seed Act and specific regulations have not yet been developed. Also the policy has not been ratified yet. Support to the Directorate of Agricultural Production and Extension Services will therefore constitute an important component of the project.

A Seed Act can be considered as the legal framework that provides for the promotion, regulation and control of plant breeding and variety release, seed multiplication and marketing, seed import and export, and quality assurance of seed and planting materials. It specifies which agency (under the auspices of MAFCRD) is supposed to carry out which function. An indispensable function is seed certification. Examples can be taken from the region: Uganda has established a National Seed Certification Services (NSCS) operating under the Crop Protection Department and accredited to the Organization for Economic Cooperation and Development (OECD) for field seed certification. In Kenya, there is a body called Kenya Plant Health Inspectorate Service (Kephis), which carries out this exercise. Whatever South Sudan will opt for, the establishment of this function is a precondition to ensuring quality seed production and distribution and can therefore not be delayed. Moreover, specific regulations providing guidelines for enforcement of the Act have to be developed.

Items	Information
	Public-private partnerships (PPPs) can present an incentive to seed companies to expand their operations as it reduces the numerous risks private companies are facing in environments such as South Sudan. Seed companies should be supported with capacity development exercises, through linking them up with local, regional, and international research centre/institutes, by including them in the drafting of acts, and regulation through establishing fora for public-private dialogue, thereby ensuring that a truly enabling environment will be created, and also by facilitating access to buyers through establishing contacts with them and by offering companies outlets for their seed through public or NGO-run free (or subsidised) seed hand-out programs.
(2) Objectives:	<p>This project aims to:</p> <ul style="list-style-type: none"> • Improve seed production systems and enhance farmer's access to quality, and highly improved and adapted seed varieties through building technical capacity of national research institutes, commercial seed companies, extension staff and farmers • Enhance availability of quality seed in the market • Encourage enterprise development and agricultural transformation
(3) Overall description including temporal and spatial extent of project:	<p>The project will create a formal, large-scale commercial seed production and distribution system. The project will cover all states and livelihoods zones. However, a phased approach is recommended. The project rests upon the presumption that research institutions exist in all states and are operational. Project implementation should be aligned to the progress being made in this regard.</p> <p>The project will start in 2015 and should last for 10 years. Its goal is to create a vibrant private sector seed industry. This is an ambitious goal, requiring some preconditions to be in place such as an enabling, regulatory environment. The creation of laws, regulations and policies should therefore be a first priority. Similarly, increasing government capacity concerning its functions will be important.</p> <p>The project will substitute (often dirty and/or counterfeit) imported seed with safe seed and planting material originating from South Sudan, certified and adapted to local conditions. This import substitution strategy will contribute to increase of yield and encourage private sector development. Both seed companies and selected farmers will be trained on how to propagate and multiply quality seeds. These farmers will benefit from being able to use better seeds and could be subcontracted by the seed companies to produce seeds to earn extra income.</p> <p>The benefits of establishing quality seed production through formal, i.e. large-scale commercial activities include employment generation, seeds resistant to drought or pests, and greater food security through increases in productivity.</p>
(4) Component and activity structure:	<p>Component 1: Support to public institutions Component 2: Support existing and new seed companies</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Support to public institutions</p> <p>Activity 1.1: Support the Directorate of Agricultural Production and Extension Services in developing a seed act, and regulations and quality standards against which commercially produced seed will be certified, in collaboration with ASARECA and with private sector input</p> <p>Outputs: a seed act, regulations and quality standards in line with the seed policy, including procedures for registering and certifying newly propagated seeds</p> <p>Activity 1.2: Establish a system for government research centres to store, share and monitor certified seeds of different varieties of different crops; seed companies will propagate and multiply seeds</p> <p>Outputs: certified seeds available at seed companies</p> <p>Activity 1.3: Establish certifying unit under the Directorate of Agricultural Production and Extension Services and strengthen capacity of the Directorate to carry out seed production activities</p> <p>Outputs: Directorate able to carry out its mandate for quality seed production</p> <p>Activity 1.4 Support the government in establishing platforms for public-private dialogue such as "South Sudan Seed Network" with seed companies to ensure private sector feedback as to what they need for an enabling environment</p> <p>Outputs: in all 10 states, bi-annual meetings with representatives of seed companies take place and government officials record and integrate outcomes in decision-making processes</p> <p>Activity 1.5: Monitor situation of quality seed production and government decision making</p> <p>Outputs: Monitoring report used by Directorate of Agricultural Production and Extension Services to improve quality seed production</p> <p>Activity 1.6: Conduct training on the seed act, regulations, quality standards, and system for sharing certified seeds between the government and private sector to government agricultural extension workers (AEOs) and NGO extension workers</p>
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Items	Information
	<p>Outputs: knowledgeable AEOs, and NGO extension workers</p> <p>Component 2: Support existing and new seed companies</p> <p>Activity 2.1: Conduct survey on situations about seed companies and outgrowers (farmers who contract with seed companies to propagate/multiply seeds) in each state, (employees of seed company, agro-input dealers, and NGO staff)</p> <p>Outputs: A survey report to determine the numbers of existing seed companies and potential outgrowers in each state</p> <p>Activity 2.2: Assist seed companies in embarking on PPPs</p> <p>Outputs: 20 seed companies have PPP-arrangement with national or state governments.</p> <p>Activity 2.3: Provide technical capacity development to seed companies and selected outgrowers to enable them to carry out seed propagation, multiplication and distribution, including management skills, required on quality seed production</p> <p>Outputs: Seed companies producing quality seeds and knowledgeable about existing seed policy, seed act, regulations, quality standards etc.; outgrowers knowledgeable about seed multiplication and about key information about seed policy, seed act and regulations</p> <p>Activity 2.4: Provide trained and committed seed companies breeder seeds to start propagation and/or multiplication</p> <p>Outputs: Seed companies with initial breeder seeds</p> <p>Activity 2.5: Link seed companies to national, regional and international research centres and/or institutes to provide them with access to their research findings and enable companies to make best use of them</p> <p>Outputs: Established contacts between seed companies and research institutes</p> <p>Activity 2.6: Link seed companies to seed buyers and public and NGO-run seed distribution programmes to enable them to provide and/or sell seeds required by these programs and commercial farmers.</p> <p>Outputs: Farmers using quality seeds</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<ul style="list-style-type: none"> • ASARECA staff works with the government (Directorate of Agricultural Production and Extension Services and Directorate of Research) to develop a seed act and according regulations. • Appropriate numbers of officers need to be assigned to the certifying unit • An external consultant facilitates the establishment of PPP-Dialogue formats and works with concerned government agencies to translate lessons learnt into viable private sector supportive policies. • External consultants provide technical assistance to seed companies. • A national focal point (funded by government or a DP) acts as facilitator for establishing contacts between seed companies and research centres/institutions and seed companies and buyers of seed such as traders and retailers.
(2) Description of beneficiaries within the framework of the project:	National government, specifically the Directorate of Plant Protection, seed companies, outgrowers, individual small scale farmers and villages

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<ul style="list-style-type: none"> • The government has developed the institutional structures and enforcement capacities to efficiently regulate the seed sector. • High quality and certified seed is produced and sold in-country. • The regulatory framework on seed production is conducive to private sector operations and new private sector operators emerge. • Farmers' knowledge on seed and planting material production increases and through this production and productivity increase. • Farmers' incomes increase steadily and they can purchase progressively more seed from commercial companies. • Food and nutrition security are strengthened and livelihoods of South Sudanese farmers have improved.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td> Negative: a Positive: d </td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: a Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: a Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation	<p>(Negative)</p> <ul style="list-style-type: none"> • No negative impacts are expected. <p>(Positive)</p> <ul style="list-style-type: none"> • The environmental and social impact will be entirely positive as greater oversight and 		

Items	Information					
measures:	control of seed and planting material production, trade and import will prevent unsafe, i.e. dirty materials to spread. Growth of the private sector for seed propagation will bring significant positive impacts on the agricultural sector.					
2.6 Monitoring and evaluation for impact measurement						
(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • No. of seed companies operating in the country • Amount of seed imported from Kenya and Uganda • Status of regulatory framework and capacity of corresponding government agencies 					
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • No. of seed companies operating in the country • Amount of seed imported from Kenya and Uganda • Capacity of research institutes to develop new varieties (no./year) • Status of regulatory framework and capacity of corresponding government agencies • No. of seeds propagated, multiplied and distributed by seed companies 					
(3) Methods of measurement and sources of information:	National Bureau of Statistics, Directorate of Research of MAFCRD, seed companies					
(4) Responsible parties for the monitoring and evaluation:	Directorate of Agricultural Production and Extension Services, Directorate of Research					
2.7 Required human resources						
(1) Principle of human resources management:	Qualified and experienced personnel in quality seed production and business administration with PhD or MSc in agriculture sciences, business administration or related subjects, along with extensive practical experience					
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> • 2 senior inspectors (grades 5 and 7) from the MAFCRD • 4 assistant inspectors: 2 from Directorate of Agricultural Production and Extension Services, 1 from Directorate of Research, and 1 from Directorate of Agriculture Production and Extension Services (grade 9 for each member) of MAFCRD 					
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	Consultants in the field of : <ul style="list-style-type: none"> • Project management (Master's degree, minimum 15-years experience): One • Seed specialist (Master's degree, 10 years experience): One • Business management/planning specialist (BA or BSc, 10-years experience or more): One • Extension specialist (BA or BSc, 5-years experience or more): One • Project coordinator (BA in Agriculture desirable, 3-years experience or more): One 					
2.8 Risk assessment with respect to project objectives and resources to be applied						
(1) Expected level of risk:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; text-align: center;">M</td> <td style="width: 25%; text-align: center;">L: Low</td> <td style="width: 25%; text-align: center;">M: Medium</td> <td style="width: 25%; text-align: center;">H: High</td> <td style="text-align: right;">(select an indicator from the list)</td> </tr> </table>	M	L: Low	M: Medium	H: High	(select an indicator from the list)
M	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	<ul style="list-style-type: none"> • Due to widespread insecurity and conflict there is a risk that the project will be affected. Preconditions for the project to go ahead as planned, is government commitment to and engagement for developing the required policies and legislations and to follow-up on their implementation. If the current crisis does not end before project inception, the government will most likely continue to use national funds for defence purposes and not invest in developing a regulatory framework and creating the necessary institutional structures for implementation and enforcement. • Conflict also deters potential investors from any kind of capital expenditure as the risk of loss is high. The risk can be mitigated by embarking on PPPs, but cannot be completely offset. • Should no political settlement be reached in the short-term, the beginning of the project should be postponed until relative calm returns to the country. 					
2.9 Other special considerations and/or notes						
(1) Other special considerations and/or notes:	This project is related to the " <u>Development of research capacity project</u> " especially about the capacity of government agricultural researchers to propagate and multiply seeds. Thus, close communications with the project staff and the Directorate of Research would be important for smooth project implementation. Also, if necessary, AEOs would support seed companies and outgrowers to multiply seeds. Initially, new seed companies could obtain breeding seeds, but they will need to produce their own parent seeds to continue to multiply seeds in the middle to long term.					
2.10 Routine operation and required resources after the completion of the project						
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	Follow-up coaching to officers of the Directorate of Agricultural Production and Extension Services, Directorate of Research and the certifying agency might be required.					

Part 3: Project cost estimation

Project duration	SSP/USD = 4												Total	% to total															
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27			27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40		
1 Management and operation of project	1,188	1,291	1,013	1,289	1,279	904	1,094	809	494	994																10,351	2,588	55%	
1 Deployment of government staff	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	180	45	1%	
1 Annual monitoring at each state by 6 project members	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	60	15	0%	
2 Annual monitoring at each state by 6 project members	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	120	30	1%	
2 Procurement of administrative services (contracted)	9																									9	2	0%	
1 Copy of documents	9																									9	2	0%	
3 Procurement of professional services (contracted)	1,070	1,120	780	1,080	1,070	695	885	760	445	945																8,850	2,213	47%	
1 International senior consultant (project management)	720	720	540	540	540	360	360	360	360	540																5,040	1,260	27%	
2 International expert (seed production)	140	140		210	210	210	210	140	140	140																1,400	350	7%	
3 International expert (business management/planning)	120	115	100	180	180	180	180	170	180	180																1,225	306	7%	
4 International junior expert (extension)	90	85	80	90	90	85	95	90	85	90																250	63	1%	
5 International junior expert (project coordinator)																										875	219	5%	
6 Local consultant (state survey)	91	153	215	191	191	191	191	31	31	31																1,312	328	7%	
4 Implementation of staff training	24	24	24																							72	18	0%	
1 Meeting for directorate staff in Juba	18																									18	5	0%	
2 Meeting for establishment of system in Juba																										18	5	0%	
3 Meeting for establishment of certifying unit in Juba	18																									30	8	0%	
4 Trainings for certifying unit staff in Juba	60																									60	15	0%	
5 Trainings for government officer at Yei (per diem)	8																									8	2	0%	
6 Trainings for government officer at Yei (transportation)	18																									180	45	1%	
7 Meeting for government official at state capital (per diem)	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	120	30	1%	
8 Meeting for government official at state capital (transportation)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6	2	0%	
9 Annual meeting in Juba		128	128	128	128	128	128	128	128	128																640	160	3%	
10 Trainings for AEOs and NGO (per diem)				32	32	32	32	32	32	32																160	40	1%	
11 Trainings for AEOs and NGO (transportation)																													
5 Implementation of research, studies and surveys																													
6 Delivery of extension and training services to the private sector																													
7 Operation and maintenance																													
2 Construction of infrastructure and procurement of equipment																													
1 Construction of office buildings																													
2 Construction of research, training and other specialized buildings																													
3 Construction of feeder roads																													
4 Construction of production, market and transportation facilities																													
5 Acquisition of land																													
6 Procurement of vehicles																													
7 Procurement of equipment																													
3 Subsidies, equity and loans																													
1 Provision of cash and/or in-kind subsidies																													
1 Seeds for distribution	81	550	2,387	2,117	2,517	1,967	1,967	1,967	420	150	220																8,441	2,110	45%
2 Seeds for distribution				100	100	100	100	100	100	100																	5,900	1,475	31%
3 Seeds for distribution				1,867	1,867	1,867	1,867	1,867	420	150	220																5,600	1,400	30%
2 Provision of training services to the private sector				81	550	420	150	550	420	150	220																2,541	635	14%
1 Explanatory sessions for seed companies in Juba				81																							81	20	0%
2 Training for seed companies at each state (per diem)				240	240	240	240	240	240	240	240																960	240	5%
3 Training for seed companies at each state (transportation)				30	30	30	30	30	30	30	30																120	30	1%

01.02 Quality seed production project (cont.)

SSP/USD = 4

Project duration	Phase 1												Phase 2				Phase 3				Phase 4				Total		
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000	% to total
4 Training for outgrowers (per diem)				125	125			125	125																	500	125 3%
5 Training for outgrowers (transportation)				25	25			25	25																	100	25 1%
6 Meeting for seed companies and research institutes in Juba			60				60																			120	30 1%
7 Meeting for farmers (per diem)			180				180																			540	135 3%
8 Meeting for farmers (transportation)			40				40																			120	30 1%
3 Equity investments																											
4 Provision of loans																											
5 Social assistance/donation (Emergency)																											
Total (SSP '000)	1,188	1,291	1,094	1,839	3,665	3,020	3,610	1,229	644	1,214																18,792	100%
Total (USD '000)	297	323	273	460	916	755	903	307	161	303																4,698	
% to total	6%	7%	6%	10%	20%	16%	19%	7%	3%	6%																100%	

Public sector project
Routine work by government
Private sector project
Routine work by private sector

2.4.3 Subsistence farmer sorghum production project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Crop		
(2) Project name:	Subsistence farmer sorghum production project		
(3) Project ID:	0 1 0 3 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2015/16	Ending FY: 2024/25	Duration (years): 10
(5) Total investment:	SSP 11,793,000	USD 2,948,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		CR.SA5	Crop production	Table 2-3
(2) Government organisation:	12	MAF-PE	Directorate of Agriculture production and Extension Service	Table 2-6
(3) Activity types:	203	SP-EX	Service delivery/infra. Dev.-Extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	X
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFPP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>Even though a vast amount of arable land is available in South Sudan, many subsistence farmers cannot realise food self-sufficiency. According to the Crop and Food Security Assessment Mission (CFSAM), total estimated net cereal production of South Sudan in 2013 was 892,004 tons. Total cereal requirement for 2014 is 1,300,552 tons based on the assumption that about 11.9 million people (including about 2 million returnees) consume 109kg/capita/year. As a result, the estimated cereal deficit in 2014 is 408,548 tons. A food deficit situation would seriously worsen if internal disputes continued and large amounts of cereal stocks in urban and peri-urban areas were looted or destroyed. To ameliorate food security conditions, the government needs to make more effort to increase staple food production by subsistence farmers (the majority of whom are women), resettled IDPs and returnees, who are all very vulnerable in rural areas.</p> <p>Sorghum (<i>dura</i>), one of the most important staple crops, is cultivated by more than half of the total households and by both women and men, with women providing most of the labour. Main production areas are the Ironstone Plateau, Greenbelt, Hills and Mountains and Eastern and Western Flood Plains zones. Cultivars are mainly traditional varieties, which take almost eight months to mature but some modern varieties, which are high yielding and early maturing with a three-month growing period, are also cultivated. Names of modern varieties are Serena, Go'do, Gadam el hamam, Kavi matama and Wad Ahmed.</p> <p>Through the CAMP situation analysis, two factors that resulted in low yields of sorghum were identified. The first is the use of traditional (or unimproved) varieties of seeds, which take longer to mature and are low yielding; some farmers cannot get access to improved high yielding seeds. In addition, rural people prefer the taste of traditional sorghum varieties which also suffer less damage from birds due to the later timing of their milk and ripening stages. Secondly, sorghum usually grows in areas of less precipitation where rainfall has tended to be erratic recently. Farmers are cultivating sorghum without irrigation which makes sorghum yields low. To mitigate the impact of drought, introduction of early maturity varieties is an effective measure.</p> <p>Under such conditions, there is an urgent need to improve the sorghum production capability of subsistence farmers. The project will focus on improvement of productivity through increase in yield (vertical expansion) since it is difficult for subsistence farmers to expand their farmland rapidly. This is because most subsistence farmers rely on family labour for ploughing and weeding, and have limited financial capacity to hire labour. In addition, due to their multiple roles (reproductive, productive and community) women have limited ability to increase their labour.</p>
(2) Objectives:	This project aims to improve the food security of subsistence farmer households through enhancement of sorghum production.
(3) Overall description including temporal and spatial extent of project:	<p>The project focuses on the improvement of sorghum production of subsistence farmers. 10,000 subsistence sorghum producers will be targeted.</p> <p>Necessary inputs (improved seeds) and technical support for sorghum production will be provided to target farmers by government agricultural extension officers (AEOs), and staff of NGOs.</p> <p>Before starting the extension activities, appropriate variety selection by livelihood zone through on-farm trials will be conducted; basic research for variety selection is not yet done in target livelihood zones. After the identification of suitable sorghum varieties, baseline surveys will be conducted to understand the production capability of target subsistence farmers (e.g. yield, area harvested, farming practices by gender, pest and diseases control, post-harvest handlings and marketing) and their social aspects (e.g. tribal conflicts, land tenure, gender disparity, youth, HIV, etc.).</p> <p>Based on the surveys' results, training contents will be determined. Training courses will focus on increase in yield (vertical expansion) rather than increase in area cultivated (horizontal expansion). Based on the FAO estimate in 2013, average cereal consumption per capita in 2013 was 109kg/year. A household with 6.3 family members (average number in 2013) needs about 0.7Mt/year to fulfil cereal requirement. Average cereal area cultivated per farming household in 2013 was about 0.88ha (about 2 feddans) and average cereal yield in 2013 was 0.76Mt/ha. So average cereal production per farming household in 2013 was 0.67Mt. If yield reaches to 1.0 Mt/ha, farming households will achieve cereal self-sufficiency. Thus, the project will target yield increment up to 1Mt/ha.</p> <p>The project will cover sorghum production areas situated in the Eastern and Western Flood Plains Iron-stone Plateau, Hills and Mountains, and Greenbelt, covering all 10 states. The project duration is 10 years.</p>

Items	Information
(4) Component structure:	<p>Special attention will be paid to ensure equal/equitable participation, contribution and benefit by both women and men at all levels of the project and this might include affirmative action where necessary.</p> <p>Project reporting, monitoring and evaluation will include production of gender disaggregated data as well as gender specific results.</p> <p>Component 1: Assessment of appropriate sorghum varieties by livelihood zone Component 2: Selection of target farmers and baseline survey on sorghum production capacity Component 3: Develop capacity of both extension agents and farmers and provide inputs Component 4: Provision of follow-up technical assistance</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Assessment of appropriate sorghum varieties by livelihood zone Activity 1.1: Conduct on-farm experiments by livelihood zone to select suitable sorghum varieties Activity 1.2: Identify suitable varieties by livelihood zone, especially for Eastern and Western Flood Plains, Iron-stone Plateau, Hills and Mountains, and Greenbelt (1.1 and 1.2 will be done in collaboration with existing research centres) and produce appropriate seed varieties (this might be done by “quality seed production” project) Outputs: survey reports, suitable variety selected, 20Mt of improved seeds for distribution</p> <p>Component 2: Selection of target farmers and baseline survey on sorghum production capacity Activity 2.1: Select target farmers in accordance with selection criteria developed by stakeholders Activity 2.2: Conduct baseline survey on target farmers (e.g. yield, area harvested, farming practices by gender, pest and diseases control, post-harvest handlings and marketing) and their social aspects (e.g. tribal conflicts, land tenure, gender disparity, youth, HIV, etc.) Activity 2.3: Hold meetings with beneficiaries to have consensus with project approaches and obligations of farmers Outputs: 10,000 farmers selected (about 5,000 women and men), baseline survey reports prepared</p> <p>Component 3: Develop capacity both extension agents and farmers and provide inputs Activity 3.1: Conduct training for AEOs and NGO staffs on sorghum production and marketing (e.g. line planting, use of fertiliser, effective weeding, pest and disease control, post-harvest handling, marketing, and gender) Activity 3.2: Kick off meetings with farmer beneficiaries to clarify planned activities during the target seasons Activity 3.3: Conduct technical trainings for farmer beneficiaries by AEOs and NGO staff to disseminate appropriate sorghum production skills Activity 3.4: Distribute necessary inputs for target farmers (e.g. improved seeds) Activity 3.5: Conduct on the job trainings (OJTs) by using own farms of target farmers Activity 3.6: Periodical meetings among target farmers to share achievements and issues Outputs: 100 extension agents and 10,000 farmers trained and improved seeds distributed</p> <p>Component 4: Provision of follow-up technical assistance Activity 4.1: Conduct periodic follow-up by AEOs and NGO staff Activity 4.2: Carry out survey on yields and skills adopted by the end of the first season Activity 4.3: Hold meeting with target farmers on preparation for the second season Activity 4.4: Conduct periodical follow-up by AEOs and NGO staff during the second season Activity 4.5: Carry out end of project surveys on target farmers to measure their achievements (e.g. yield, area harvested, farming practices by gender, pest and diseases control, post-harvest handlings and marketing) Outputs: 10,000 farmers followed-up, survey reports prepared</p> <p>* Farmer beneficiaries will be provided technical support during two seasons.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:

<p>For appropriate variety selection and on-farm trials:</p> <ul style="list-style-type: none"> • Staff of government research centres and some Agriculture Extension Officers • For baseline survey: • 2 local consultants, and 100 extension agents (e.g. AEOs and NGO staff) <p>For capacity development:</p>
--

Items	Information		
(2) Description of beneficiaries within the framework of the project:	<ul style="list-style-type: none"> • Staff of government training centres, 100 extension agents For follow-up activities: <ul style="list-style-type: none"> • 100 extension agents, agro-dealers and tractor operators For end of project surveys: <ul style="list-style-type: none"> • 2 local consultants and 100 extension agents Female and male subsistence sorghum producers who do not attain food self-sufficiency in their households		
2.4 Outcomes, impact and contributions to value added (i.e. economic growth)			
(1) Outcomes and impact:	Through improvement of productivity, most of the target subsistence sorghum producers and some of their neighbours will achieve household food self-sufficiency. This situation might greatly contribute to stabilisation of rural areas, particularly for improvement of food and nutrition security. Also benefits of the project will be shared fairly among the household members (e.g. adults female and male, and children).		
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)		
2.5 Environmental and social impact, and mitigation measures			
(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%; padding: 5px;">Negative: b Positive: c</td> <td style="padding: 5px;"> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: b Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: b Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • A negative social impact might be observed if an unintended encroachment into public land and open spaces is made by sorghum producers. <p>(Positive)</p> <ul style="list-style-type: none"> • The social impact of the project will be mainly positive. Producing enough staple food will contribute significantly to improve livelihoods of target farmers. • The project pays much attention to social impact. Vulnerable subsistence farmers will be selected with gender consideration by following selection criteria. Selection processes of target farmers should be transparent in involving local communities and stakeholders. • To maintain soil fertility and improve productivity, the project will promote use of organic fertiliser such as manure and compost. This will have a positive impact on the environment. 		
2.6 Monitoring and evaluation for impact measurement			
(1) Measurable indicators and situation at a starting point:	Subsistence farmer households cannot achieve food self-sufficiency. Their sorghum yield is about 0.5-0.8 Mt/ha.		
(2) Measurable indicators and situation at the end point:	Sorghum yield will increase up to 1.0 Mt/ha and subsistence households will be able to achieve food self-sufficiency. 10,000 female and male subsistence farmers will be trained and improve their sorghum production skills.		
(3) Methods of measurement and sources of information:	Baseline and end of project surveys, CFSAM data, NBS census data		
(4) Responsible parties for the monitoring and evaluation:	MAFCRD (Directorate of Agriculture Production and Extension Services) in collaboration with State Ministry of Agriculture will be the responsible for monitoring and evaluation. The farmers and extension workers will also work together to conduct self-evaluations.		
2.7 Required human resources			
(1) Principle of human resources management:	The government does not need to increase the number of government extension officers but will try to improve their efficiency of service delivery, by providing means of transport (bicycle or motorbike) and technical training as well as practical skills to work with gender issues, and introducing performance based evaluation.		
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> • Project manager (one Director or Deputy Director) • Project staffs at national level (senior inspector level, 5 staff) for project management, procurement, logistics, monitoring • Project staff at state level (one in-charge for each target state, total 10 staff)) • Extension agents (e.g. AEOs and NGO staff) (about 100 staff) 		
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	Consultants in the field of: <ul style="list-style-type: none"> • One project management (Master degree, 15-years experience) • One crop husbandry/extension expert (BSc or BA, 5-years experience) • One agriculture training expert (BSc, 5-years experience) • One social (including gender) and farmer survey (BSc or BA, 5-years experience) <p>Local consultants for baseline and end of project surveys will be hired.</p> <p>Private agro-dealers will be involved to disseminate information on new technologies for subsistence farmers, such as the use of fertiliser and agro chemicals.</p>		

Items	Information
2.8 Risk assessment with respect to project objectives and resources to be applied	
(1) Expected level of risk:	M L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	<p>Expected risk level might be medium due to the following reasons.</p> <ul style="list-style-type: none"> • Insecurity of rural areas • Unfavourable conditions of access roads to reach beneficiaries • Conflicts or tensions among beneficiaries, and between beneficiaries and non-beneficiaries • Gender disparity (negative cultural and customary practices) • Delay of input delivery due to inappropriate timing of budget disbursement and limited number of extension staff who deliver inputs • Limited amount of available quality seeds • Limited capacity of AEOs and limited means of transport • Natural disasters (e.g. drought, flooding, bird pests, locusts and diseases) • Manmade disasters (e.g. insecurity, raiding, and ethnic conflicts) • Degraded soil fertility by mono-cropping in long-term (long-term risk)
2.9 Other special considerations and/or notes	
(1) Other special considerations and/or notes:	<p>Selection of appropriate beneficiaries is one of the most sensitive parts of this project. Selection criteria should be discussed and decided with stakeholders in advance and selection process should be transparent both for beneficiaries and stakeholders. Gender balance should also be considered for the selection.</p>
2.10 Routine operation and required resources after the completion of the project	
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>Continuous support is needed for the targeted farmers by extension agents. If extension agents are government officers, the follow-up activities will be done by them as routine work with minimum cost (fuel for motorbike and some inputs).</p> <p>If extension agents are NGO officers, salary and necessary costs would be required.</p>

2.4.4 Subsistence farmer maize production project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Crop		
(2) Project name:	Subsistence farmer maize production project		
(3) Project ID:	01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2015/16	Ending FY: 2024/25	Duration (years): 10
(5) Total investment:	SSP 24,487,000	USD 6,122,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		CR.SA5	Crop production	Table 2-3
(2) Government organisation:	12	MAF-PE	Directorate of Agriculture production and Extension Service	Table 2-6
(3) Activity types:	203	SP-EX	Service delivery/infra. Dev.-Extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	X
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	
	72	JG	Jonglei State	
	73	UT	Unity State	
	81	WA	Warrap State	
	82	NB	Northern Bahr el Ghazal State	
	83	WB	Western Bahr el Ghazal State	
	84	LK	Lakes State	
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFPP	Eastern Flood Plains	
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	
	04	ISP	Ironstone Plateau	
	05	NSR	Nile-Sobat Rivers	
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>Even though a vast amount of arable land is available in South Sudan, many subsistence farmers cannot realise food self-sufficiency. According to the Crop and Food Security Assessment Mission (CFSAM), total estimated net cereal production of South Sudan in 2013 was 892,004 tons. Total cereal requirement for 2014 is 1,300,552 tons based on the assumption that 11.9 million people (including 2 million returnees) consume 109kg/capita/year. As a result, the estimated cereal deficit in 2014 is 408,548 tons. The food deficit situation would get much worse if internal disputes continued and large amounts of cereal stocks in urban and peri-urban areas were looted or destroyed. To ameliorate food security conditions, the government needs to make more effort to increase staple food production by subsistence farmers (the majority of whom are women), resettled IDPs and returnees, who are all very vulnerable in rural areas.</p> <p>Maize is the second staple food for the South Sudanese and is cultivated by more than 30% of households, and by both women and men, with women providing most of the labour. Maize is grown mainly in the Greenbelt and Hills and Mountain zones. In the northern part of the country, farmers grow maize in small patches near their homes as supplementary food. Thus, the project focuses on the Greenbelt zone so as to achieve a large increase in production.</p> <p>Maize cultivars in South Sudan are mainly open pollinated varieties but some progressive and large-scale farmers have started using hybrid varieties imported from Kenya and Uganda. Both types take almost five months to mature. Names of varieties are Longe 4, 5, 8 and 9, and Yei 2. Maize seeds are sown in rows since a maize seed is much larger than a sorghum seed, which is usually broadcast. Between rows of planted maize, other crops such as groundnuts, beans, cowpeas and pumpkin are cultivated. Post-harvest losses of the first cropping season (May-September) in the Greenbelt zone are extremely high due to high humidity and poor storage facilities. Wild animals (e.g., monkeys, baboons, rats and squirrels) or livestock can cause serious damage to maize plants. Insect pests (e.g., locust, termite and stem bore) are another large factor for decreased productivity. Recently, Maize lethal necrosis disease has become one of the most serious diseases in neighboring countries (e.g. Kenya and Uganda); prevention measures for this disease need to be taken. Due to these causes it is estimated that the average yield is stalled at about 1.5-2.0Mt/ha in the Greenbelt zone, which is lower than that of Uganda and Ethiopia.</p> <p>Under such conditions, there is an urgent need to improve the maize production capability of subsistence farmers. The project will focus on improvement of productivity through increase in yield (vertical expansion) since it is difficult for subsistence farmers to expand their farmland rapidly. This is because most subsistence farmers rely on family labour for ploughing and weeding, and have limited financial capacity to hire labour. In addition, due to their multiple roles (reproductive, productive and community) women have limited ability to increase their labour.</p>
(2) Objectives:	<p>This project aims to improve the food security of subsistence farmer households through enhancement of maize production.</p>
(3) Overall description including temporal and spatial extent of project:	<p>The project focuses on the improvement of maize production of subsistence farmers. 10,000 subsistence maize producers will be targeted.</p> <p>Necessary inputs (improved seeds and fertilisers) and technical support for maize production will be provided to target farmers by government agricultural extension officers (AEOs), and staff of NGOs.</p> <p>Before starting the extension activities, appropriate variety selection will be made based on the research conducted by the Palotaka Basic Seeds Centre. After the identification of suitable maize varieties, social assessment and baseline surveys will be conducted to understand social aspects in target areas (e.g. tribal conflicts, land tenure, gender disparity, youth, HIV, etc.) and the production capability of target subsistence farmers (e.g. yield, area harvested, farming practices by gender, pest and disease control, post-harvest handling and marketing).</p> <p>Based on the surveys' results, training contents will be determined. Training courses will focus on increase in yield (vertical expansion) rather than increase in area cultivated (horizontal expansion). Based on the FAO estimate (CFSAM), the average area cultivated of maize per farming household in 2013 was about 0.35ha, 0.26ha and 0.90ha in Central, Eastern and Western Equatoria states respectively. Since farmers cultivate several crops simultaneously, they cannot secure a large area for maize production. Hence the project focuses on yield increase to produce more maize on the limited farmland of smallholder subsistence farmers.</p>

Items	Information
(4) Component structure:	<p>The project will cover maize production areas situated in the Greenbelt, covering 3 states in the Greater Equatoria region (i.e. Central, Eastern and Western Equatoria states). The project duration is 10 years.</p> <p>Special attention will be paid to ensure equal/equitable participation, contribution and benefit by both women and men at all levels of the project; this might include affirmative action where necessary. Project reporting, monitoring and evaluation will include gender disaggregated data as well as gender specific results. The project will also pay special attention to youth participation.</p> <p>Component 1: Assessment of appropriate maize varieties and seed propagation Component 2: Selection of target farmers and baseline survey on maize production capacity Component 3: Development of capacity of both extension agents and farmers and provision of inputs Component 4: Provision of follow-up technical assistance</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Assessment of appropriate maize varieties and seed propagation</p> <p>Activity 1.1: Conduct on-farm experiments in target areas to select suitable maize varieties by referring to the research results conducted by the Palotaka Basic Seeds Centre</p> <p>Activity 1.2: Identify suitable varieties (1.1 and 1.2 will be done in collaboration with existing research centres in Yei and Palotaka) and propagate appropriate seed varieties (this might be done by <u>the quality seed production project</u>)</p> <p>Outputs: survey reports clarifying suitable varieties, suitable varieties selected, 100Mt of improved seeds produced for distribution</p> <p>Component 2: Selection of target farmers and baseline survey on maize production capacity</p> <p>Activity 2.1: Conduct social assessment in target areas (e.g. tribal conflicts, conflicts between farmers and livestock keepers, land tenure, gender disparity, youth, HIV, etc.)</p> <p>Activity 2.2: Select target farmers in accordance with selection criteria developed by stakeholders based on social assessment (with a special focus on youth and gender)</p> <p>Activity 2.3: Conduct baseline survey on target farmers (e.g. yield, area harvested, farming practices by gender, pest and disease control, post-harvest handling, processing and marketing)</p> <p>Activity 2.4: Hold meetings with beneficiaries to have consensus with project approaches and obligations of farmers</p> <p>Outputs: 10,000 farmers selected (about 5,000 females and 5,000 males); baseline survey reports clarifying present conditions; 100 meetings held and project buy in achieved</p> <p>Component 3: Development of capacity of both extension agents and farmers and provision of inputs</p> <p>Activity 3.1: Conduct training for AEOs and NGO staff on maize production and marketing (e.g. line planting, use of fertiliser, effective weeding, pest and disease control, post-harvest handling, marketing, processing and gender)</p> <p>Activity 3.2: Kick off meetings with farmer beneficiaries to clarify planned activities during the target seasons</p> <p>Activity 3.3: Conduct technical training for farmer beneficiaries by AEOs and NGO staff to disseminate appropriate maize production skills</p> <p>Activity 3.4: Distribute necessary inputs for target farmers (e.g. improved seeds and fertilisers)</p> <p>Activity 3.5: Conduct on the job training (OJTs) by using farms of target farmers</p> <p>Activity 3.6: Provide extension services on pest and disease management (this service could be provided by plant doctors who offer diagnostics and advice at mobile clinics, as mentioned in the <u>"National crop pests and diseases control project"</u>.)</p> <p>Activity 3.7: Construct appropriate storage facilities for demonstration</p> <p>Activity 3.8: Periodic meetings among target farmers to share achievements and issues</p> <p>Outputs: 40 extension agents able to assist maize farmers, 10,000 farmers trained and able to improve productivity, improved seeds (open pollinated seed/farmer and 5kg hybrid seed/farmer) and fertiliser (Urea and NPK fertiliser (N:15, P:15, K:15)) distributed, and 40 demonstration storage facilities constructed</p> <p>Component 4: Provision of follow-up technical assistance</p> <p>Activity 4.1: Conduct periodic follow-up by AEOs and NGO staff</p> <p>Activity 4.2: Carry out survey on yields and skills adopted by the end of the first season</p>

Items	Information
	<p>Activity 4.3: Hold meeting with target farmers on preparation for the second season</p> <p>Activity 4.4: Conduct periodic follow-up by AEOs and NGO staff during the second season</p> <p>Activity 4.5: Carry out end of project surveys on target farmers to measure their achievements (e.g. yield, area harvested, farming practices by gender, pest and diseases control, post-harvest handling and marketing)</p> <p>Outputs: 10,000 farmers followed-up, survey reports prepared showing impact of project</p> <p>* Farmer beneficiaries will be provided technical support during two seasons.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<p>For appropriate variety selection and on-farm trials:</p> <ul style="list-style-type: none"> • Staff of government research centres and some Agriculture Extension Officers <p>For baseline survey:</p> <ul style="list-style-type: none"> • 2 local consultants, and 40 extension agents (e.g. AEOs and NGO staff) <p>For capacity development:</p> <ul style="list-style-type: none"> • Staff of government training centres, 40 extension agents <p>For follow-up activities:</p> <ul style="list-style-type: none"> • 40 extension agents, agro-dealers and tractor operators <p>For end of project surveys:</p> <ul style="list-style-type: none"> • 2 local consultants and 40 extension agents
(2) Description of beneficiaries within the framework of the project:	Female and male subsistence maize producers who do not attain food self-sufficiency in their households, and AEOs

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<p>Through improvement of productivity, most of the target subsistence maize producers and some of their neighbours will achieve household food self-sufficiency. This situation might greatly contribute to stabilisation of rural areas, particularly for improvement of food and nutrition security. Also benefits of the project will be shared fairly among the household members (e.g. adults female and male, and children).</p> <p>Job opportunities would be created for youth.</p>
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: b</td> <td rowspan="2">Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society</td> </tr> <tr> <td>Positive: c</td> </tr> </table>	Negative: b	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society	Positive: c
Negative: b	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society			
Positive: c				
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • A negative social impact might be observed if an unintended encroachment into public land and open spaces is made by maize producers. Also overuse of chemical fertilisers and agricultural chemicals would have a negative impact on the environment. Improperly stored maize may contain aflatoxin which is a very harmful substance for humans. <p>(Positive)</p> <ul style="list-style-type: none"> • The social impact of the project will be mainly positive. Producing enough staple food will contribute significantly to improve livelihoods of target farmers. The project pays much attention to social impact. Vulnerable subsistence farmers will be selected with gender and youth considerations by following selection criteria. Selection processes of target farmers should be transparent in involving local communities and stakeholders. • To maintain soil fertility and improve productivity, the project will promote not only chemical fertiliser application but also use of organic fertiliser such as manure and compost. This will have a positive impact on the environment. 			

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	Many subsistence farmer households find it difficult to achieve food self-sufficiency (no. of households that do not attain food self-sufficiency). Their maize yield is about 1.5-2.0 Mt/ha.
(2) Measurable indicators and situation at the end point:	Maize yield will increase up to 2.5 Mt/ha, which is almost the same level as Uganda and Ethiopia, and subsistence households will be able to achieve food self-sufficiency. 10,000 female and male subsistence farmers will be trained and improve their maize production skills. Farmers start utilising improved seeds, organic and chemical fertilisers and mobile plant clinic services. Some farmers construct appropriate storage facilities.
(3) Methods of measurement and sources of information:	Baseline and end of project surveys, CFSAM data, NBS census data
(4) Responsible parties for the monitoring and evaluation:	MAFCRD (Directorate of Agriculture Production and Extension Services) in collaboration with State Ministry of Agriculture will be responsible for monitoring and evaluation. The

Items	Information					
	farmers and extension workers will also work together to conduct self-evaluations.					
2.7 Required human resources						
(1) Principle of human resources management:	The government does not need to increase the number of government extension officers but will try to improve their efficiency of service delivery, by providing means of transport (bicycle or motorbike) and technical training as well as practical skills to work with gender issues, and introducing performance based evaluation.					
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> • Project manager (one Director or Deputy Director) • Project staff at national level (senior inspector level, 2 staff) for project management, procurement, logistics, monitoring • Project staff at state level (one in-charge for each target state, total 3 staff)) • Extension agents (e.g. AEOs and NGO staff) (about 40 staff) 					
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Consultants in the field of:</p> <ul style="list-style-type: none"> • One project management (Master degree, 15-years experience) • One crop husbandry/extension expert (BSc or BA, 5-years experience) • One agriculture training expert (BSc, 5-years experience) • One social (including gender) and farmer survey expert (BSc or BA, 5-years experience) <p>Local consultants for baseline and end of project surveys will be hired.</p> <p>Private agro-dealers will be involved to disseminate information on new technologies for subsistence farmers, such as the use of fertiliser and agro chemicals.</p>					
2.8 Risk assessment with respect to project objectives and resources to be applied						
(1) Expected level of risk:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center; width: 15%;">M</td> <td style="text-align: center; width: 15%;">L: Low</td> <td style="text-align: center; width: 15%;">M: Medium</td> <td style="text-align: center; width: 15%;">H: High</td> <td style="text-align: right;">(select an indicator from the list)</td> </tr> </table>	M	L: Low	M: Medium	H: High	(select an indicator from the list)
M	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	<p>Expected risk level might be medium due to the following reasons.</p> <ul style="list-style-type: none"> • Insecurity of rural areas • Unfavourable conditions of access roads to reach beneficiaries • Conflicts or tensions among beneficiaries, and between beneficiaries and non-beneficiaries • Gender disparity (negative cultural and customary practices) • Delay of input delivery due to inappropriate timing of budget disbursement and limited number of extension staff who deliver inputs • Limited amount of available quality seeds • Limited capacity of AEOs and limited means of transport • Natural disasters (e.g. drought, flooding, bird pests, locusts and diseases) • Manmade disasters (e.g. insecurity, raiding, and ethnic conflicts) • Degraded soil fertility by mono-cropping in long-term (long-term risk) 					
2.9 Other special considerations and/or notes						
(1) Other special considerations and/or notes:	Selection of appropriate beneficiaries is one of the most sensitive parts of this project. Selection criteria should be discussed and decided with stakeholders in advance and the selection process should be transparent both for beneficiaries and stakeholders. Gender balance should also be considered for the selection.					
2.10 Routine operation and required resources after the completion of the project						
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>Continuous support is needed for the targeted farmers by extension agents. If extension agents are government officers, the follow-up activities will be done by them as routine work with minimum cost (fuel for motorbike and some inputs).</p> <p>If extension agents are NGO officers, salary and necessary costs would be required.</p>					

Part 3: Project cost estimation

Project duration	SSP/USD = 4												Total	% to total												
	Cost group																									
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27			27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39
1 Management and operation of project																										
1 Deployment of government staff																										
2 Procurement of administrative services (contracted)																										
3 Procurement of professional services (contracted)																										
1 International consultant (project manager)																										
2 International consultant (crop/husbandry/extension)																										
3 International consultant (agricultural training)																										
4 International consultant (social and farmer survey)																										
5 Local consultant (baseline and endline survey)																										
4 Implementation of staff training																										
1 2-week training for 40 extension agents (per diem)																										
2 2-week training for 40 extension agents (transportation)																										
5 Implementation of research, studies and surveys																										
1 Fuels for agents for farmers selection & baseline																										
2 Fuels for agents for farmers meetings																										
3 Fuels for agents for farmers field training																										
4 Fuels for agents for follow up																										
5 Fuels for agents for survey																										
6 Fuels for monitoring (by national staff)																										
6 Delivery of extension and training services to the private sector																										
7 Operation and maintenance																										
2 Construction of infrastructure and procurement of equipment																										
1 Construction of office buildings																										
2 Construction of research, training and other specialized buildings																										
3 Construction of feeder roads																										
4 Construction of production, market and transportation facilities																										
1 40 demonstration storages																										
5 Acquisition of land																										
6 Procurement of vehicles																										
7 Procurement of equipment																										
3 Subsidies, equity and loans																										
1 Provision of cash and/or in-kind subsidies																										
1 Maize seeds (OPV) (50,000kg x 2)																										
2 Maize seeds (hybrid) (50,000kg x 2)																										
3 Fertilizer (Urea) 50kg x 10,000 x 2																										
4 Fertilizer (NPK) 50kg x 10,000 x 2																										
2 Provision of training services to the private sector																										
3 Equity investments																										
4 Provision of loans																										
5 Social assistance/donation (Emergency)																										
Total (SSP '000)																										
Total (USD '000)																										
% to total																										

Public sector project
Routine work by government
Private sector project
Routine work by private sector

2.4.5 Subsistence farmer rice production project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector	Crop		
(2) Project name	Subsistence farmer rice production project		
(3) Project ID:	01: Crop	02: Livestock	03: Forestry 04: Fisheries 05: Institutional Development
(4) Start and ending fiscal year:	Starting FY: 2015/16	Ending FY: 2024/25	Duration (years): 10
(5) Total investment:	SSP 11,205,000	USD 2,801,000	Note: Not including recurrent cost
(6) Name of this file (automatic):			

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		CR.SA5	Crop production	Table 2-3
(2) Government organisation:	12	MAF-PE	Directorate of Agriculture production and Extension Service	Table 2-6
(3) Activity types:	203	SP-EX	Service delivery/infra. Dev.-Extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	X
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	
	84	LK	Lakes State	
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	
	04	ISP	Ironstone Plateau	
	05	NSR	Nile-Sobat Rivers	
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>Even though a vast amount of arable land is available in South Sudan, many subsistence farmers cannot realise food self-sufficiency. According to the Crop and Food Security Assessment Mission (CFSAM), total estimated net cereal production of South Sudan in 2013 was 892,004 tons. Total cereal requirement for 2014 is 1,300,552 tons based on the assumption that 11.9 million people (including 2 million returnees) consume 109kg/capita/year. As a result, the estimated cereal deficit in 2014 is 408,548 tons. The food deficit situation would get much worse if internal disputes continued and large amounts of cereal stocks in urban and peri-urban areas were looted or destroyed. To ameliorate food security conditions, the government needs to make more effort to increase staple food production by subsistence farmers (the majority of whom are women), resettled IDPs and returnees, who are all very vulnerable in rural areas.</p> <p>Rice is one of the important staple for the South Sudanese, particularly for urban dwellers, since rice is convenient for storing and cooking. Currently, the volume of rice production is not significant (only one percent of total households grew rice in 2009) but rice could substantially contribute to enhancing food security at both household and national levels since rice imports have been increasing in recent years. There are some large areas with potential for rice production. Upland rice grows mainly in the Greenbelt zones. Cultivars of upland rice (NERICA 1, 4 and 10) are cultivated and are newly introduced from Uganda. Lowland rice (or paddy rice) could grow in the areas that flood in the Eastern and Western Flood Plains and Nile Sobat zones; however, this is not fully exploited so far.</p> <p>Lowland rice is also cultivated in the Aweil Irrigation Rice Scheme (AIRS) in Northern Bahr el Ghazal State. AIRS is a national irrigation scheme and about 2,700 feddans of farmland were operational in 2013, although 11,000 feddans were intended to be irrigated. Cultivars in the scheme are BR 4 and BG 400-1, and yield level is quite low about 1 to 1.5 t/ha. In 2009 AIRS was rehabilitated through the Aweil Irrigation Rehabilitation Project supported by GIZ under the Sudan Productive Capacity Recovery Programme (SPCRP), funded by the EU. During the project period, demining, and dike and canal maintenance were carried out and agricultural machinery (e.g. large scale rice mill and heavy equipment) and technical assistance provided. However, after completion, the scheme has not operated effectively due to limited funds for operating costs, limited human resources and unclear scheme ownership and demarcation of responsibilities between the national and state governments.</p> <p>Under such conditions, there is a high need to improve the rice production capability of subsistence farmers. The project will focus on improvement of productivity through both increase in yield (vertical expansion) and expansion of area cultivated (horizontal expansion) since the potential for rice production is not fully exploited. Most subsistence farmers rely on family labour for ploughing and weeding, and have limited financial capacity to hire labour to expand area cultivated. However, rice production would attract new young farmers because rice is a profitable crop compared to other cereals.</p>
(2) Objectives:	This project aims to improve the food security of subsistence farmer households through enhancement of rice production.
(3) Overall description including temporal and spatial extent of project:	<p>The project focuses on the improvement of rice production of subsistence farmers. 7,000 existing subsistence rice producers or new young farmers will be targeted.</p> <p>Necessary inputs (e.g. improved seeds) and technical support for rice production will be provided to target farmers by government agricultural extension officers (AEOs), and staff of NGOs.</p> <p>Before starting the extension activities, appropriate variety selection will be made based on the research conducted by the Yei Agriculture Research Centre (YARC), the Palotaka Basic Seeds Centre (PBSC) and Aweil Irrigation Rice Scheme (AIRS). After the identification of suitable rice varieties for upland and lowland, social assessment and baseline surveys will be conducted to understand social aspects in target areas (e.g. tribal conflicts, land tenure, gender disparity, youth, HIV, etc.) and the production capability of target subsistence farmers (e.g. yield, area cultivated, farming practices by gender, pest and disease control, post-harvest handling, processing and marketing).</p> <p>Based on the surveys' results, training contents will be determined. Training courses will focus on both increase in yield (vertical expansion) and increase in area cultivated (horizontal expansion) since yield is still at a low level and the area cultivated is quite limited. Particularly, effective use of wetland for rice production would be examined and promoted.</p> <p>The project will cover potential rice production areas situated in the Greenbelt and Flood</p>

Items	Information
(4) Component structure:	<p>Plains zones covering 7 states (excluding Western Equatoria, Western Bahr el Ghazal, and Lakes States). Upland rice will be disseminated in the Greenbelt, whereas lowland rice will be promoted in the Flood Plains and small-scale wetlands in the Greenbelt. Small-scale wetland rice production will be dealt by the "<u>Development of small and medium scale irrigation development project.</u>" Rehabilitation of and technical support to AIRS will be dealt by the "<u>Development of large-scale irrigation project.</u>" The project duration is 10 years.</p> <p>Special attention will be paid to ensure equal/equitable participation, contribution and benefit by both women and men at all levels of the project; this might include affirmative action where necessary. Project reporting, monitoring and evaluation will include gender disaggregated data as well as gender specific results. The project will also pay special attention to young farmers' participation.</p> <p>Component 1: Assessment of appropriate rice varieties and seed propagation Component 2: Selection of target farmers and baseline survey on rice production capacity Component 3: Development of capacity of both extension agents and farmers and provision of inputs Component 4: Provision of follow-up technical assistance</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Assessment of appropriate rice varieties and seed propagation Activity 1.1: Conduct on-farm experiments in target areas to select suitable rice varieties by referring to the research results conducted by YARC, PBSC and AIRS. Activity 1.2: Identify suitable varieties (1.1 and 1.2 will be done in collaboration with YARC, PBSC and AIRS) and propagate appropriate seed varieties (this might be done by the "<u>Quality seed production project.</u>") Outputs: survey reports clarifying suitable varieties, suitable varieties selected, 35Mt of improved seeds produced for distribution</p> <p>Component 2: Selection of target farmers and baseline survey on rice production capacity Activity 2.1: Conduct social assessment in target areas (e.g. tribal conflicts, conflicts between farmers and livestock keepers, land tenure, gender disparity, youth, HIV, etc.) and also environmental assessment if wetlands are used for rice cultivation Activity 2.2: Select target farmers in accordance with selection criteria developed by stakeholders based on social assessment (with a special focus on youth and gender) Activity 2.3: Conduct baseline survey on target farmers (e.g. yield, area harvested, farming practices by gender, pest and disease control, post-harvest handling, processing and marketing) Activity 2.4: Hold meetings with beneficiaries to have consensus with project approaches and obligations of farmers Outputs: 7,000 farmers selected (about 3,500 females and 3,500 males including more than 50% young farmers who are less than 30 years old); baseline survey reports clarifying present conditions, 70 meetings held and project buy in achieved</p> <p>Component 3: Development of capacity of both extension agents and farmers and provision of inputs Activity 3.1: Conduct training for AEOs and NGO staff on rice production and marketing (e.g. farm planning, seedling preparation and line planting for lowland rice, use of fertiliser, effective weeding, pest and disease control, post-harvest handling, processing (milling), marketing, and gender) *Training on small-scale irrigation development and its Operation & Maintenance(O&M), and water distribution planning would be handled by "<u>Development of small- and medium scale irrigation project</u>" Activity 3.2: Kick off meetings with farmer beneficiaries to clarify planned activities during the target seasons Activity 3.3: Conduct technical training for farmer beneficiaries by AEOs and NGO staff to disseminate appropriate rice production skills Activity 3.4: Distribute necessary inputs for target farmers (e.g. improved seeds) Activity 3.5: Conduct on the job training (OJTs) by using farms of target farmers Activity 3.6: Provide extension services on pest and disease management (this service could be provided by plant doctors who offer diagnostics and advice at mobile clinics, as mentioned in the "<u>National crop pests and diseases control project.</u>") Activity 3.7: Provide assistance to form farmer based organisations (FBOs) for effective post-harvest operations, especially for milling Activity 3.8: Provide FBOs with loans to purchase appropriate small-scale milling machines Activity 3.9: Conduct technical training for FBOs, which purchase milling machines, by AEOs and NGO staff to improve skills on milling machine operation and quality control of milled rice</p>

Items	Information
	<p>Activity 3.10: Periodic meetings among target farmers to share achievements and issues Outputs: 70 extension agents able to assist rice farmers, 7,000 farmers trained and able to improve productivity, improved seeds distributed, and accessible loans for purchasing milling machines</p> <p>Component 4: Provision of follow-up technical assistance Activity 4.1: Conduct periodic follow-up by AEOs and NGO staff Activity 4.2: Carry out survey on yields and skills adopted by the end of the first season Activity 4.3: Hold meeting with target farmers on preparation for the second season Activity 4.4: Conduct periodic follow-up by AEOs and NGO staff during the second season Activity 4.5: Carry out end of project surveys on target farmers to measure their achievements (e.g. yield, area harvested, farming practices by gender, pest and diseases control, post-harvest handling and marketing) Outputs: 7,000 farmers followed-up, survey reports prepared showing impact of project</p> <p>* Farmer beneficiaries will be provided technical support during two seasons.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<p>For appropriate variety selection and on-farm trials:</p> <ul style="list-style-type: none"> • Staff of government research centres and some Agriculture Extension Officers <p>For baseline survey:</p> <ul style="list-style-type: none"> • 3 local consultants, and 70 extension agents (e.g. AEOs and NGO staff) <p>For capacity development:</p> <ul style="list-style-type: none"> • Staff of government training centres, 70 extension agents <p>For follow-up activities:</p> <ul style="list-style-type: none"> • 70 extension agents and agro-dealers <p>For end of project surveys:</p> <ul style="list-style-type: none"> • 3 local consultants and 70 extension agents
(2) Description of beneficiaries within the framework of the project:	Female and male subsistence rice producers and new young farmers who do not attain food self-sufficiency in their households, and AEOs

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<p>Through improvement of productivity and income growth, most of the target subsistence rice producers and new young farmers and some of their neighbours will achieve household food self-sufficiency. This situation might greatly contribute to stabilisation of rural areas, particularly for improvement of food and nutrition security. Also benefits of the project will be shared fairly among the household members (e.g. adults female and male, and children). Job opportunities would be created for youth.</p>
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td> <p>Negative: b Positive: c</p> </td> <td> <p>Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society</p> </td> </tr> </table>	<p>Negative: b Positive: c</p>	<p>Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society</p>
<p>Negative: b Positive: c</p>	<p>Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society</p>		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative) A negative social impact might be observed if an unintended encroachment into protected wetland, public land and open spaces is made by rice producers. Without appropriate use of wetland, the environment of small-scale wetlands could seriously deteriorate. Also overuse of chemical fertilisers and agricultural chemicals would have a negative impact on the environment. Improperly stored rice may contain aflatoxin which is a very harmful substance for humans.</p> <p>(Positive) The social impact of the project will be mainly positive. Producing enough rice as a staple food and cash crop will contribute significantly to improve livelihoods of target farmers. The project pays much attention to social impact. Vulnerable subsistence farmers will be selected with gender and youth considerations by following selection criteria. Selection processes of target farmers should be transparent in involving local communities and stakeholders. To maintain soil fertility and improve productivity, the project will promote not only chemical fertiliser application but also use of organic fertiliser such as manure and compost. This will have a positive impact on the soil environment.</p>		

Items	Information					
2.6 Monitoring and evaluation for impact measurement						
(1) Measurable indicators and situation at a starting point:	Many subsistence farmer households find it difficult to achieve food self-sufficiency (no. of households that do not attain food self-sufficiency). Rice yield is about 1.0-1.5 Mt/ha in AIRS. Upland rice yield might be much lower than that of AIRS.					
(2) Measurable indicators and situation at the end point:	Lowland rice yield will increase up to 1.5 Mt/ha, which is still less than Uganda and Kenya, and upland rice yield will reach 1.0 Mt/ha. 7,000 female and male subsistence farmers will be trained and improve their rice production skills. Farmers start utilising improved seeds, organic and chemical fertilisers and mobile plant clinic services if available. Some FBOs will operate appropriate small-scale milling machines.					
(3) Methods of measurement and sources of information:	Baseline and end of project surveys, CFSAM data, NBS census data					
(4) Responsible parties for the monitoring and evaluation:	MAFCRD (Directorate of Agriculture Production and Extension Services) in collaboration with State Ministry of Agriculture will be responsible for monitoring and evaluation. The farmers and extension workers will also work together to conduct self-evaluations.					
2.7 Required human resources						
(1) Principle of human resources management:	The government does not need to increase the number of government extension officers but will try to improve their efficiency of service delivery, by providing means of transport (bicycle or motorbike) and technical training as well as practical skills to work with gender issues, and introducing performance based evaluation.					
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> • Project manager (one Director or Deputy Director) • Project staff at national level (senior inspector level, 2 staff) for project management, procurement, logistics, monitoring • Project staff at state level (one in-charge for each target state, total 7 staff)) • Extension agents (e.g. AEOs and NGO staff) (about 70 staff) 					
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Consultants in the field of:</p> <ul style="list-style-type: none"> • One project management (Master degree, 15-years experience) • One crop husbandry/extension expert (BSc or BA, 5-years experience) • One agriculture training expert (BSc, 5-years experience) • One social (including gender) and farmer survey expert (BSc or BA, 5-years experience) <p>• Local consultants for baseline and end of project surveys will be hired.</p> <p>• Private agro-dealers will be involved to disseminate information on new technologies for subsistence farmers, such as the use of fertiliser and agro chemicals.</p>					
2.8 Risk assessment with respect to project objectives and resources to be applied						
(1) Expected level of risk	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px 10px;">M</td> <td style="padding: 2px 10px;">L: Low</td> <td style="padding: 2px 10px;">M: Medium</td> <td style="padding: 2px 10px;">H: High</td> <td style="padding: 2px 10px;">(select an indicator from the list)</td> </tr> </table>	M	L: Low	M: Medium	H: High	(select an indicator from the list)
M	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	<p>Expected risk level might be medium due to the following reasons.</p> <ul style="list-style-type: none"> • Insecurity of rural areas • Unfavourable conditions of access roads to reach beneficiaries • Conflicts or tensions among beneficiaries, and between beneficiaries and non-beneficiaries • Gender disparity (negative cultural and customary practices) • Delay of input delivery due to inappropriate timing of budget disbursement and limited number of extension staff who deliver inputs • Limited amount of available quality seeds • Limited capacity of AEOs and NGO staff and limited means of transport • Natural disasters (e.g. drought, flooding, bird pests, locusts and diseases) • Manmade disasters (e.g. insecurity, raiding, and ethnic conflicts) • Degraded soil fertility by mono-cropping in long-term (long-term risk) 					
2.9 Other special considerations and/or notes						
(1) Other special considerations and/or notes:	Selection of appropriate beneficiaries is one of the most sensitive parts of this project. Selection criteria should be discussed and decided with stakeholders in advance and the selection process should be transparent both for beneficiaries and stakeholders. Gender balance should also be considered for the selection.					
2.10 Routine operation and required resources after the completion of the project						
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>Continuous support is needed for the targeted farmers by extension agents. If extension agents are government officers, the follow-up activities will be done by them as routine work with minimum cost (fuel for motorbike and some inputs).</p> <p>If extension agents are NGO officers, salary and necessary costs would be required.</p>					

Part 3: Project cost estimation

Project duration	SSPAUSD = 4												Total	% to														
	Phase 1			Phase 2			Phase 3			Phase 4																		
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27			27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000
01.05 Subsistence farmer rice production project																												
Project duration																												
1 Management and operation of project																												
1 Deployment of government staff																												
1 Monitoring to states (per diem)	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	182	46	2%
2 Monitoring to states (transportation)	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	86	22	1%
2 Procurement of administrative services (contracted)	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	96	24	1%
3 Procurement of professional services (contracted)																												
1 International consultant (project manager)	2,202	1,494	1,177	619	558	860	317	227	151	842													9,525	2,381	85%			
2 International consultant (crop husbandry/extension)	450	360	270	90	180	180	90	180	180	180													1,800	450	16%			
3 International consultant (agricultural training)	605	454	454	302	227	378	151	151	151	151													3,024	756	27%			
4 International consultant (social including gender survey)	529	454	454	227	151	227	76	76	76	76													2,268	567	20%			
5 Local consultant (baseline / endline survey)	378	227				76																	756	189	7%			
4 Implementation of staff training	240																						600	150	5%			
1 2-week training for 70 extension agents at Juba (per diem)	312					312																	624	156	6%			
2 2-week training for 70 extension agents at Juba (transportation)	252					252																	504	126	5%			
5 Implementation of research, studies and surveys	60					60																	120	30	1%			
6 Delivery of extension and training services to the private sector																												
7 Operation and maintenance	5	57	55	9	9	5	57	55	9	9													270	68	2%			
1 Fuels for agents for baseline survey	4					4																	8	2	0%			
2 Fuels for agents for farmers selection meetings	2					2																	7	2	0%			
3 Fuels for agents for farmers field training	24	24	24	24	24	24	24	24	24	24													94	24	1%			
4 Fuels for agents for follow up	30	30	30	30	30	30	30	30	30	30													121	30	1%			
5 Fuels for agents for survey	1	1	1	1	1	1	1	1	1	1													30	8	0%			
6 Fuels for monitoring (by national staff)	1	1	1	1	1	1	1	1	1	1													11	3	0%			
2 Construction of infrastructure and procurement of equipment																												
1 Construction of office buildings																												
2 Construction of research, training and other specialized buildings																												
3 Construction of feeder roads																												
4 Construction of production, market and transportation facilities																												
5 Acquisition of land																												
6 Procurement of vehicles																												
7 Procurement of equipment																												
3 Subsidies, equity and loans	70	420	350			70	420	350															1,680	420	15%			
1 Provision of cash and/or in-kind subsidies	350	350	350			350	350	350															1,400	350	12%			
1 improved seeds for distribution. (35Mt x 2)	350	350	350			350	350	350															1,400	350	12%			
2 Provision of training services to the private sector	70	70	70			70	70	70															280	70	3%			
1 Beneficiaries meetings (transportation)	70	70	70			70	70	70															280	70	3%			
3 Equity investments																												
4 Provision of loans																												
5 Social assistance/donation (Emergency)																												
Total (SSP '000)	2,589	1,994	1,605	651	590	1,248	816	655	183	874													11,205	2,801	100%			
T total (USD '000)	647	498	401	163	147	312	204	164	46	219													2,801					
% to total	23%	18%	14%	6%	5%	11%	7%	6%	2%	8%													100%					

Public sector project
Routine work by government
Private sector project
Routine work by private sector

2.4.6 Subsistence farmer vegetable and fruit production project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Crop		
(2) Project name:	Subsistence farmer vegetable and fruit production project		
(3) Project ID:	01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2015/16	Ending FY: 2024/25	Duration (years): 10
(5) Total investment:	SSP 15,798,000	USD 3,950,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		CR.SA6	Horticultural crop production	Table 2-3
(2) Government organisation:	12	MAF-PE	Directorate of Agriculture Production and Extension Services	Table 2-6
(3) Activity types:	203	SP-EX	Service delivery/infra. Dev.-Extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	X
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFPP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income		

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>Despite the fact that South Sudan has abundant natural resources, most horticultural products are imported. Depending on vicinity, they originate from Sudan, Kenya and Uganda. Prices fluctuate, but are generally high and out of reach for most subsistence farmers. Not being able to afford vegetables or fruits and not growing them themselves has a negative impact not only on food, but also on nutrition security.</p> <p>While it is a myth that increased production of horticultural produce alone would improve the nutritional status of subsistence farming households, it is certainly a precondition. There is a need to incorporate nutrition interventions into smallholder agriculture and rural livelihoods programs through encouraging home production of foods like fruits and vegetables that are rich in nutrients.</p> <p>To make increased production work for improved nutrition requires additional efforts in terms of awareness raising and education, especially targeting women and children. Setting up school gardens in which children learn how to grow vegetables and fruits, are informed about their nutritional value, don't go hungry at lunch time, but eat what the school garden yields, and get used to regular consumption of horticultural products, is a very efficient intervention to achieve better nutrition in the short-term, resulting in all sorts of long-term benefits.</p> <p>The benefits of childhood nutrition interventions go far beyond mortality reduction to include cognitive and physical development, better health and higher earnings. As the SUN (Scaling Up Nutrition) Initiative describes, interventions in nutrition offer among the very highest rates of return feasible in international development through their payoffs in terms of mortality, morbidity, physical and mental growth, contributions to MDGs, lifetime earnings and overall development.</p> <p>Fruits and vegetables are grown under nearly all farming systems. The potential for growing amaranthus, Sukuma wiki, onions, okra, tomatoes, eggplants, potatoes, cabbages, bananas, mangoes, papayas, oranges, lemons and pineapples is very high. Cultivation of fruits and vegetables allows for productive employment, especially for women, youth and vulnerable groups. The benefits of training women in horticulture production and the nutritional aspects of its consumption exceed the immediate benefits of providing a source of additional food, but help to boost further positive outcomes. As women are mainly responsible for child care, increasing women's and their husbands' knowledge on healthy nutrition and enabling them to feed their children accordingly, greatly enhances the physical and mental health of the population in the long term.</p> <p>The South Sudan Agriculture Sector Policy Framework (ASPF) acknowledges the important role of horticulture and states as a policy objective to "achieve a sustainable increase in the production of fruits and vegetables for both domestic and export markets."</p>
(2) Objectives:	<p>The objective of the project is to gradually substitute imports of vegetables and fruits and to increase both production and consumption levels in South Sudan. It has a dual focus on both food and nutrition security.</p> <p>The project aims at increasing availability, access, and consumption (utilization) of horticulture crops to improve micronutrient intakes and dietary diversity, and dietary patterns protective against chronic disease.</p> <p>Since physical and mental health is a precondition to building up a stable society and a prosperous economy, this project will help to lay the foundations. Direct beneficiaries will be around 10,000 female and male farmers and primary school pupils, benefitting from training and school gardens.</p>
(3) Overall description including temporal and spatial extent of project:	<p>The project will start in 2015 and last for 10 years. Due to the nature of the project, short-term gains in terms of increased production of horticultural products can be expected to materialize almost from the beginning. The benefits of improved nutrition will only become evident at a later stage. It will be hard to attribute them to project interventions. However, scientific evidence suggests a clear causal link between mental and physical health and the amount and nutritional value of daily dietary intakes.</p> <p>The project is meant to cover localities in all states. Suitable locations in terms of agronomic conditions and availability and interest of potential beneficiaries will be determined in detail by the implementing agency at project inception. The project aims at targeting 10,000 female and male farmers, spread over the 10 states. In addition, all primary schools will be involved in the issue of nutrition. South Sudan has a national syllabus, and even though it cannot now be established if nutrition is part of it, the project will ensure that education on nutrition is one of the subjects covered at primary school</p>

Items	Information
	<p>level.</p> <p>As many primary schools per state as are willing to establish school gardens will be supported in doing so. The support will primarily take the form of teachers' training, but also –at least initially – include hand-outs of free seeds. From a pest management perspective it is essential that these seeds should be free of diseases. This implies sourcing certified seeds if possible, or at the very least sourcing from an experienced and reputable supplier</p> <p>Apart from schools, this project targets mainly women. Even though women do most of the agricultural work in South Sudan (as elsewhere in Africa), they are marginalised and have little access to productive assets. South Sudan is a male-dominated society and changing gender stereotypes will be a difficult and lengthy process. Since women are traditionally engaged in producing vegetables, supporting them in these activities offers an opportunity to assist women (and some men) farmers without provoking domestic problems.</p> <p>An additional reason for focussing on women is the fact that they are responsible for reproductive activities and child care. Hence, educating women about the requirements and effects of healthy nutrition will have a much greater impact on generations to come than doing the same with men. The greatest impact of nutrition on a child's development occurs between – 9 to +24 months. Thus, it is of utmost importance that pregnant and lactating mothers and mothers of young children are aware of and have access to nutritious food, to feed themselves and their children.</p>
(4) Component structure:	<p>Component 1: Baseline Surveys and monitoring Data needed to plan the project in detail and to be able to monitor progress and eventually impact will be gathered, i.e. a baseline on current state of subsistence vegetable production in the states; agronomic suitability of the different horticultural products to determine which ones to promote where; and beneficiaries and private sector actors (agro-dealers) to work with identified</p> <p>Component 2: Strengthen public institutions An enabling environment conducive to horticulture production and utilization through training officials in horticulture departments, extension agents and teachers, and including nutrition in national primary school curriculum will be institutionalized</p> <p>Component 3: Training and Inputs Access to inputs and knowledge will be increased through provision of training on production and utilisation of vegetables and fruits and distribution of seed vouchers</p> <p>Component 4: Private sector engagement A range of agro-dealers will emerge, having horticulture seeds available, able to redeem vouchers and impart basic knowledge on the use of seeds and chemicals</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Baseline surveys and monitoring</p> <p>Activity 1.1: Carry-out baseline surveys on vegetable and fruit production and social aspects (e.g. tribal conflicts, poverty index, gender disparity, youth, HIV, etc.) in selected areas in all 10 states by agricultural extension officers (AEOs) and consultants</p> <p>Activity 1.2: Carry-out assessment to select target horticultural products according to consumption preferences (esp. of children) and agronomic suitability by AEOs in 10 states</p> <p>Activity 1.3: Carry-out assessment on availability of female and male farmers interested to participate, followed by a participatory selection process and a questionnaire on consumption patterns by AEOs in 10 states</p> <p>Activity 1.4: Carry-out assessment on availability of agro-dealers and base selection on capacity (to procure clean, quality seeds and appropriate and safe chemicals) and willingness to work with the project by AEOs in 10 states</p> <p>Activity 1.5: Carry-out annual surveys to assess uptake and progress (school gardens, female and male farmers) by AEOs in 10 states</p> <p>Outputs 1: survey reports for 10 states, selection criteria, selected target groups in 10 states, 10,000 farmers (about 8,000 female and 2,000 male farmers) selected</p> <p>Component 2: Strengthen public institutions</p> <p>Activity 2.1: Carry out training for government employees of Departments of Horticulture, in Ministries of Agriculture at national and state level</p> <p>Outputs 2.1: 10 trained National staff and 20 trained State staff</p> <p>Activity 2.2: Train AEOs on the specifics of horticultural production, including training on vegetable and fruit pests and diseases and their management, soil and weeds management, and postharvest handlings at smallholder level</p> <p>Outputs 2.2: 200 trained AEOs</p> <p>Activity 2.3: Work with Ministry of Education to ensure that nutrition is part of the curriculum for primary education</p>
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Items	Information
	<p>Activity 2.4: Provide professional training to primary school teachers on issues of nutrition to enable them to impart this knowledge to pupils Outputs 2.4: 200 trained primary school teachers</p> <p>Activity 2.5: Train teachers on the basics of horticultural production and assist them in preparing school gardens, incl. provision of seeds Outputs 2.5: 200 trained primary school teachers</p> <p>Component 3: Training and Inputs Activity 3.1: Train female and male farmers on horticultural production methods, including safe and appropriate pest management, soil and weeds management, basic post-harvest handling (e.g. drying for conservation, etc.), and irrigation techniques Outputs 3.1: 500 trained groups (about 20 farmers/group, total 10,000 female and male farmers)</p> <p>Activity 3.2: Provide or sell quality seeds and fruit tree seedlings to the farmer groups and target schools Outputs 3.2 One pack of various vegetable seeds per person/school used, and 5 fruit tree seedlings/person and 100 seedlings/school planted</p> <p>Activity 3.3: Raise awareness among target beneficiaries on the nutritional value of horticulture products and their role in the nutrition of children</p> <p>Component 4: Private sector engagement Activity 4.1: work with agro-dealers to enable them to provide basic information on use of seeds and to define a restricted list of low toxicity pesticides which are suitable for use on vegetables and fruits by smallholders and improve the quality of advice and instruction provided to customers, especially the illiterate and women Outputs: 50 lectured agro-dealers</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<ul style="list-style-type: none"> • National government: oversight and coordination • State governments: AEOs training teachers and female and male farmers on production, basic irrigation and post-harvest techniques • DP consultants: Horticulture and nutrition experts train teachers on imparting knowledge on nutrition to pupils, contractors for baseline surveys • Private sector: agro-dealers engaged in agricultural input trade
(2) Description of beneficiaries within the framework of the project:	<p>Direct beneficiaries are up to 10,000 female and male farmers (500 farmer groups), from all 10 states, who are interested in taking part in the project. Also 10 National and 20 State staff, 200 AEOs and 200 school teachers are indirect beneficiaries for capacity development.</p> <p>National primary schools are part of the project in the sense that they will provide education in nutrition as this is/becomes part of the curriculum; on a voluntary basis a number of primary schools with access to land that can be transformed into school gardens will also participate. The value added by this component is dual: children learn how to cultivate vegetables and fruits and eat their home-grown produce for lunch, so they are not hungry, but able to follow the lessons.</p>

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	Mainly women farmers and their family members, especially children, maintain good health through a quality and balanced diet. The efficiency of agricultural production by farmers will improve.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td> Negative: b Positive: c </td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: b Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: b Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • Female and male farmers will be selected in a participatory process. The whole country is a potential intervention area, so no community or household will be excluded by design. This should reduce the risk of inter- and intra-communal conflict. The greatest potential for conflict is intra-household. Since many men will not be able to participate in the project, hence benefit from access to training or inputs, they might try to prevent their women from taking part. <p>(Positive)</p> <ul style="list-style-type: none"> • The project will not have a negative impact on the environment, provided chemical fertilizers and pesticides will not be used excessively. Environmental Impact Assessments will put an emphasis on imparting knowledge on how to make use of 		

Items	Information
	<p>organic fertilizer and manure and lower impact pest management approaches.</p> <ul style="list-style-type: none"> Should such behaviour be observed on a larger scale, the project has to be complemented with sensitization campaigns, raising awareness among the male population how their sons and heirs will benefit in the long run from: a) well-fed pregnant and lactating mothers and b) children being provided with nutritious food

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	A baseline survey will be carried-out at the onset of the project and assess the status (different varieties, volume per variety, relationship imported/ locally grown) of vegetable and fruit production across the country and the number and state of school gardens already in place. Levels of under- and malnutrition are well observed by various International Organisations active in South Sudan. Hence, an effort will be made to use their data - if possible - and to retrieve macro-level information on the nutritional status of the population in general and specifically of pregnant, lactating, and young mothers and children from these sources, broken down by intervention area. Individual data on the state of health of the target group (school children, participating women/men and their children) will for reasons of cost and attribution problems not be collected. A questionnaire on food habits will produce data sufficient to capture the impact of the project through changes in consumption patterns.
(2) Measurable indicators and situation at the end point:	After 10 years, again a survey assessing the state of horticulture production will be carried out to determine if/how the situation has changed. In the meantime, production data will be collected on a yearly basis at participating households and school gardens. If possible the same data sources used for establishing macro-level nutritional conditions at the beginning of the project will be used to determine change after 10 years. However, one needs to bear in mind that the causal link between project intervention and observed changes might be rather weak. The impact of the project can more reliably traced by questionnaires on consumption patterns to be completed by the target group again at the end of the project.
(3) Methods of measurement and sources of information:	Surveys on production and questionnaires on consumption
(4) Responsible parties for the monitoring and evaluation:	MAFCRD (Directorate of Agriculture Production and Extension Services) in collaboration with State Ministry of Agriculture will be the responsible for monitoring and evaluation. The farmers and extension workers will also work together to conduct self-evaluations.

2.7 Required human resources

(1) Principle of human resources management:	<p>Maintaining existing number of AEOs (not hiring additional AEOs) and increasing efficiency of their work by providing transport and training for capacity development</p> <p>The CAMP secretariat will provide oversight, while state ministries implement the project and provide extension services, supported by private consultants (DP staff) The private sector will be supported in making the right seeds plus basic information in seed handling available as well as on safe use of any chemicals they are recommending.</p>
(2) Required human resources in the public sector (Positions, grades and numbers):	1 Project Manager and 4 staff (total 5 staff) at national level, 2 staff in each target state (total 20 staff) and 20 AEOs (total 200 AEOs) in each target state
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	4 consultants (2 horticulture including 1 team leader, 1 extension and training, and 1 pests and diseases experts, experience in working in post-conflict set-ups), 5 staff at national level, and 2 staff in each state 20 AEOs, in each state

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	M L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	South Sudan is a country prone to man-made disasters. Working in South Sudan is therefore inherently risky. A precondition for the project to be carried out as outlined is peace or at least low levels of insecurity. If major internal conflict disrupts accessibility of intervention areas and/or schooling, the project's activities have to be modified accordingly to prevent its failure. This will require additional planning, and potentially result in delays, but it will not affect the necessity to implement the project at all.

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	Selection of appropriate beneficiaries is one of the most sensitive parts of this project. Selection criteria should be discussed and decided with stakeholders in advance and selection process should be transparent both for beneficiaries and stakeholders. Gender balance should also be considered for the selection.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project.	<p>AEOs' routine monitoring and follow-up will be made to support target female and male farmer groups.</p> <p>There will be a continuing need for extension advice and advice and supplies of seeds and pesticides from agro-dealers.</p>
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Items	Information
Description of the required resources can be done in an indicative manner.	

01.06 Subsistence farmer vegetable and fruit production project (cont.)

Project duration	SSP/USD = 4												Total	% to total														
	Phase 1			Phase 2			Phase 3			Phase 4					SSP '000 USD '000	% to												
Cost group	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000	% to total	
1 Training for 500 agro dealers at states																												
2																												
3 Equity investments																												
4 Provision of loans																												
5 Social assistance/donation (Emergency)																												
Total (SSP '000)	3,069	3,036	2,681	1,736	1,301	826	899	1,093	552	604																		
Total (USD '000)	767	759	670	434	325	207	225	273	138	151																		
% to total	19%	19%	17%	11%	8%	5%	6%	7%	3%	4%																		

Public sector project
Routine work by government

Private sector project
Routine work by private sector

2.4.7 Subsistence farmer cassava production and value addition project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Crop		
(2) Project name:	Subsistence farmer cassava production and value addition project		
(3) Project ID:	01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2015/16	Ending FY: 2024/25	Duration (years): 10
(5) Total investment:	SSP 18,100,00	USD 4,525,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		CRSA5	Crop production	Table 2-3
(2) Government organisation:	03	MAF-CO	Directorate of Cooperative development	Table 2-6
	12	MAF-PE	Directorate of Production and Extension Services	Table 2-6
(3) Activity types:	203	SP-EX	Service delivery/infra. dev. – Extension and training	Table 2-12
	205	SP-CR	Service delivery/infra. dev. – Provision of credit	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	X
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	
	72	JG	Jonglei State	
	73	UT	Unity State	
	81	WA	Warrap State	
	82	NB	Northern Bahr el Ghazal State	
	83	WB	Western Bahr el Ghazal State	
	84	LK	Lakes State	
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income		

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>Cassava is important, not only as a food crop but even more so as a major source of income for rural households. Cassava is largely consumed in many processed forms in South Sudan. As a cash crop, cassava generates cash income for the largest number of households in comparison with other staples. A large proportion of total production is planted annually for sale.</p> <p>Cassava is mainly a subsistence crop grown for food by small-scale farmers who sell the surplus. It grows well in poor soils with limited labour requirements. It provides food security during conflicts when the invader cannot easily destroy or remove the crop, since it conveniently grows underground. Cassava is usually intercropped with vegetables, plantation crops (such as coconut, oil palm, and coffee), yam, sweet potato, melon, maize, rice, groundnut, or other legumes. The application of fertilizer remains limited among small-scale farmers due to the high cost and lack of availability. Roots can be harvested between 6 months and 3 years after planting.</p> <p>As a food crop, cassava has some inherent characteristics which make it attractive, especially to subsistence farmers in South Sudan. First, it is rich in carbohydrates especially starch, calcium, vitamins B and C, and essential minerals and consequently has a multiplicity of end uses. Secondly, it is available all year round, making it preferable to other, more seasonal crops such as grains, peas and beans and other crops for food security. Compared to grains, cassava is more tolerant of low soil fertility and more resistant to drought, pests and diseases. Furthermore, its roots are storable in the ground for months after they mature. In some communities in South Sudan cassava leaves are an important dish e.g. Western Equatoria State in the Azande area. In urban areas cassava leaves are a part of dishes eaten during important occasions and is liked by many consumers.</p> <p>Currently, there are no large scale imports of cassava. It is in principle a low value commodity, with price differentials in the region appearing too low to warrant transport costs and border taxes. Moreover, cassava is the only crop to attract a 15% custom duty at South Sudanese borders. The others stand at 10%.</p> <p>However, there are some imports from Uganda. As demand exceeds local production, these imports supplement domestic production and help meet the market that cannot be satisfied by domestically grown cassava. A potential for import substitution exists. To be able to generate income from import substitution, substantial extension work and agronomic support (seed varieties, organic fertilizer, and agricultural practices) will be needed to lower relative production cost.</p> <p>Though a detailed study of prices is yet to be carried out, preliminary data suggests that, at retail-level, prices fetched by cassava flour are almost double that of cassava chips. Hence, the current potential lies primarily in improving yields and processing cassava tubers into flour and linking farmer/farmer groups more directly to flour sales.</p> <p>For producing chips, knives can be used for peeling and chipping, but in Uganda manual and electrical graters are available facilitating the production of chips. These graters and presses remove a large proportion of the water prior to drying. However, dried cassava in a grated state may not be acceptable to consumers. Market traders indicate that large hand-cut dried cassava pieces are preferable. Any interventions into cassava drying need to take into account the preferences of the end-users, so testing consumer acceptability should precede any intervention.</p> <p>Milling of the chips into flour can be done on a household level, but some small-scale millers are also operating. The project will engage with small-scale millers and traders to develop value chains of cassava.</p>
(2) Objectives:	<p>Focusing on increased productivity and value addition by processing, the project will contribute to reduce food insecurity by improving food availability and increasing income for female and male subsistence cassava farmers with the involvement of small agro-dealers and traders who can sell processing equipment, cassava chips and flour.</p>
(3) Overall description including temporal and spatial extent of project:	<p>On average, only 13 percent of the agricultural households in South Sudan are growing cassava. However, production is clearly concentrated in Western Equatoria State (WES) with 63 percent of agricultural holdings in this state growing cassava. WES will therefore be the main intervention area, with potential to expand to Central Equatoria (32% of households engaged in cassava growing) and to the Hills and Mountains of Eastern Equatoria State in which 7% of households are currently engaged in cassava production.</p> <p>This project aims to improve productivity of subsistence cassava farmers and enhance</p>

Items	Information
(4) Component structure:	<p>value addition by processing. The project will target 3000 (about 1,500 females and 1,500 males) subsistence cassava farmers with the involvement of at least 20 small agro-dealers and 10 cassava chips and flour traders.</p> <p>Cassava processing is intended to generate extra cash income for subsistence farmers, increase food availability in the market, and decrease dependency from imports. The project will focus on farmer parents with the aim of attracting youth to agriculture. This is necessary to ensure the sustainability of the agricultural sector in the long-term which is today dominated by an older generation of farmers. Apart from this, engaging youth is a strategy to mitigate the risk of conflict resulting from youth being idle and without prospects. The project will showcase that within agriculture serious business opportunities can be found, explored, and developed further.</p>
	<p>Component 1: Support to the formation/promotion of farmer based organisations: FBOs (farmer groups, association, cooperatives) Component 2: Support to increasing productivity Component 3: Introduction of simple processing methods for cassava and improvement of access to markets</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Support to the formation/promotion of FBOs (farmer groups, association, cooperatives)</p> <p>Activity 1.1: Develop criteria for selecting farmers (already engaged in cassava production, similar land size and yields, similar socio-economic status, physical proximity to each other and to markets, at least 50% women, 50% youths, etc.), based on do-no-harm principles</p> <p>Activity 1.2: Conduct social assessment in the target areas to ensure selection of participants does not increase the risk of conflict and gender disparity (e.g. tribal conflicts, land tenure, gender disparity, youth, HIV, etc.)</p> <p>Activity 1.3: Carry-out survey to select potential members of groups/associations/cooperatives</p> <p>Outputs 1.2, 1.3: survey reports prepared</p> <p>Activity 1.4: Organise meeting with potential members to discuss approach and objectives of the project and obtain commitment to participation</p> <p>Outputs: 100 meetings held</p> <p>Activity 1.5: Assists groups in setting up an organisational structure and (in case existing farmer groups opt for becoming a cooperative or registered association) with the registration processes by Cooperative Offices (COs)</p> <p>Outputs: 100-150 farmer groups organised, 20 COs trained</p> <p>Component 2: Support to increasing productivity</p> <p>Activity 2.1: Carry-out baseline survey on target FBOs (e.g. yield, area harvested, farming practices by gender, pest and diseases control, post-harvest handling and marketing)</p> <p>Outputs: survey report prepared</p> <p>Activity 2.2: Conduct training for Agriculture Extension Officers (AEOs) on cassava production methods, soil management, pests and diseases control and post-harvest handling</p> <p>Outputs: 30 AEOs trained and able to assist cassava farmers</p> <p>Activity 2.3: Provide training for FBO representatives (Training of Trainers on production methods, soil management, pests and diseases control and post-harvest handling through on-farm training)</p> <p>Outputs: 300 representatives (about 150 females and 150 males) of cassava farmers trained</p> <p>Activity 2.4: Provide training to FBO members by trained farmers with support of AEOs</p> <p>Outputs: 2700 farmers trained</p> <p>Activity 2.5: Provide virus free, high-yielding and pest and disease resistant varieties</p> <p>Outputs: 3000 farmers received improved variety stakes</p> <p>Activity 2.6: Conduct follow-up activities by AEOs</p> <p>Outputs: bi-weekly monitoring conducted for 100-150 groups by 30 AEOs</p> <p>Activity 2.7: Carry-out surveys to assess yield levels by farmers and AEOs</p> <p>Outputs: Survey reports prepared</p> <p>Component 3: Introduction of simple processing methods for cassava and improvement of access to markets</p> <p>Activity 3.1: Carry-out market surveys to assess demand for and prices of cassava processed products (soak and dried cassava, cassava chips, and cassava flour)</p> <p>Outputs: survey reports prepared including cassava products with the most value added</p> <p>Activity 3.2: Provide training to enable FBO to select processing methods based on expected return on investment or to enhance linkages with small local millers</p>

Items	Information
	<p>Outputs: 300 representatives (about 150 females and 150 males) of cassava farmers able to select value added products</p> <p>Activity 3.3: Facilitate access to micro-finance institutions providing small loans to FBOs Outputs: some FBOs obtain loans</p> <p>Activity 3.4: Facilitate access to processing equipment Outputs: processing equipment purchased by FBOs</p> <p>Activity 3.5: Provide training on operation and maintenance of processing machines Outputs: 100 FBO representatives able to use processing machines</p> <p>Activity 3.6: Provide training on quality control (including sanitation), packaging and transport of final products Outputs: 100 FBO representatives producing quality value added products</p> <p>Activity 3.7: Facilitate establishment of linkages with small millers and traders Outputs: some millers and traders linked with FBOs who can sell their products</p> <p>Activity 3.8: Carry-out survey to assess volumes of cassava processed and produce sold Outputs: Survey reports prepared to measure impact of project</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<ul style="list-style-type: none"> • Government: AEOs, COs, training centre staff, target state and county government officials, and national government officials • Private sector: agro-dealers, millers, and traders • Others: DP hired consultants (local and international)
(2) Description of beneficiaries within the framework of the project:	<ul style="list-style-type: none"> • Subsistence cassava producers and their family members • FBO representatives in terms of business management skills development • AEOs and COs with improved skills gained on training courses • Traders of cassava tubers, chips, flour and leaves

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	Cassava producers increase food availability by producing cassava as their food and by purchasing necessary food from markets through sales of surplus and value addition (e.g. dry cassava and flour)
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: b</td> <td rowspan="2">Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society</td> </tr> <tr> <td>Positive: c</td> </tr> </table>	Negative: b	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society	Positive: c
Negative: b	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society			
Positive: c				
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • If an outbreak of cassava mosaic and brown streak virus diseases occurs due to project activities, it would have a serious negative environmental impact. This should be avoided by introducing virus free cassava stakes, appropriate crop rotation and close monitoring and feedback systems for pests and diseases control. • Since gains in yields are mainly achieved through increased productivity, land issues will be mitigated. Inter-cropping methods and organic fertilizers are used to prevent long-term soil degradation. <p>(Positive)</p> <ul style="list-style-type: none"> • The project is likely to have a positive impact on society through income generation opportunities provided. By trying to engage idle youth, it should have a conflict mitigating effect. 			

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	• Yield levels range between 10-15t/ha, very little locally processed cassava (chips and flour) is found in local markets.
(2) Measurable indicators and situation at the end point:	Yields will increase up to 15-20t/ha due to the adoption of high-yielding and disease-resistant varieties. Some cassava producing FBOs will develop processing businesses. Locally produced cassava products (chips and flour) are available on local markets at a competitive price.
(3) Methods of measurement and sources of information:	Farmers' records; market assessments carried out as a baseline at the beginning of the project and a survey conducted after the project has ended
(4) Responsible parties for the monitoring and evaluation:	Farmers, AEOs, COs, target county and state government officials, experts of DP

2.7 Required human resources

(1) Principle of human resources management:	<p>Oversight by public sector (state government), implementation jointly by DP and private sector</p> <p>The government does not need to increase the number of AEOs but tries to improve their</p>
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Items	Information
(2) Required human resources in the public sector (Positions, grades and numbers):	<p>efficiency of service delivery by providing means of transport (bicycle or motorbike) and technical training, and introducing performance based evaluation.</p> <ul style="list-style-type: none"> • Project manager (one Director or Deputy Director) at MAFCRD • Project staff at national level (senior inspector level, 2 staff) for project management, procurement, logistics, monitoring • Project staff at state level (two in-charge for each target state, total 4 staff) • AEOs (30 staff) and COs (20 staff)
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Consultants in the field of:</p> <ul style="list-style-type: none"> • 1. One project management (Master degree, 15-year experience) • 2. One cassava production expert (BSc or BA, 10-year experience) • 3. One extension and training expert (BSc or BA, 5-year experience) • 4. One value-chain development (BSc or BA, 5-year experience) <p>Local consultants for baseline and end-line surveys Private agro-dealers, millers, traders</p>

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	H L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	<p>Expected risk level might be high due to the following reasons.</p> <ul style="list-style-type: none"> • Outbreak of cassava mosaic and brown streak diseases • Limited amount of available quality virus free stakes • Insecurity of target areas • Unfavourable conditions of access roads to reach beneficiaries • Conflicts or tensions among beneficiaries, and between beneficiaries and non-beneficiaries • Gender disparity • Delay of input delivery due to inappropriate timing of budget disbursement and limited number of AEOs who deliver inputs • Limited capacity of AEOs and limited means of transport • Natural disasters (e.g. drought, flooding, bird pests, locusts and diseases) • Manmade disasters (e.g. insecurity, raiding, and ethnic conflicts)

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	<p>In case the current situation of instability and insecurity does not improve, project implementation is at risk. Risks will then be manifested in various problems:</p> <ul style="list-style-type: none"> • Farming activities disrupted • Infrastructure still dilapidated and access to markets by roads limited • Access to input inexistent/limited <p>In addition selection of appropriate beneficiaries is one of the most sensitive parts of this project. Selection criteria should be discussed and decided with stakeholders in advance and selection process should be transparent both for beneficiaries and stakeholders. Gender balance should also be considered for the selection.</p>
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>Continuous support is necessary for the targeted farmers by AEOs. AEOs will conduct the follow-up activities as a routine work with minimum cost (fuel for motorbike and some inputs).</p>
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Part 3: Project cost estimation

Project duration	Cost group	SSP/USD = 4												Total	% to total													
		Phase 1			Phase 2			Phase 3			Phase 4																	
		15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27			27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40
1 Management and operation of project																										14,560	3,640	80%
1 Deployment of government staff																										93	23	1%
1 Survey for transformation/promotion of FBOs (per diem)																										30	8	0%
2 Cooperative officers training (per diem)																										25	6	0%
3 Baseline survey for productivity (per diem)																										13	3	0%
4 Agricultural extension officers training (per diem)																										25	6	0%
2 Procurement of administrative services (contracted)																										13,442	3,361	74%
3 Procurement of professional services (contracted)																										5,040	1,260	28%
1 International consultant (project management)																										5,400	1,350	30%
2 International consultant (cassava production)																										1,350	338	7%
3 International consultant (extension and training)																										1,350	338	7%
4 International consultant (value chain)																										302	76	2%
5 Local consultant (field survey for baseline and endline)																										840	210	5%
4 Implementation of staff training																										392	98	2%
1 Training for 20 cooperative officers at Ye (per diem)																										28	7	0%
2 Training for 20 cooperative officers at Ye (transportation)																										392	98	2%
3 Training for 30 AEOs at Ye (per diem)																										28	7	0%
4 Training for 30 AEOs at Ye (transportation)																										392	98	2%
5 Implementation of research, studies and surveys																										28	7	0%
6 Delivery of extension and training services to the private sector																										184	46	1%
7 Operation and maintenance																										15	4	0%
1 Fuels for survey for transformation/promotion of FBOs																										15	4	0%
2 Fuels for baseline survey																										6	1	0%
3 Fuels for support field training																										12	3	0%
4 Fuels for bi-week monitoring and follow up by AEOs																										26	6	0%
5 Fuels for endline survey																										6	2	0%
6 Fuels for market survey																										6	1	0%
7 Fuels for FBOs processing training by agro-dealer																										6	1	0%
8 Fuels for monitoring/assessment survey																										17	4	0%
2 Construction of infrastructure and procurement of equipment																										8	2	0%
1 Construction of office buildings																										3,540	885	20%
2 Construction of research, training and other specialized buildings																										480	120	3%
3 Construction of feeder roads																										480	120	3%
4 Construction of production, market and transportation facilities																										3,060	765	17%
5 Acquisition of land																										600	150	3%
6 Procurement of vehicles																										600	150	3%
7 Procurement of equipment																										1,680	420	9%
3 Subsidies, equity and loans																										120	30	1%
1 Provision of cash and/or in-kind subsidies																										600	1,140	300
1 Improved variety of cassava stakes																										240	240	
2 Provision of training services to the private sector																										600	900	300
1 FBO formation meeting																										600	840	
2 FBO representative training (300) (per diem)																										60	60	
3 FBO representative training (300) (transportation)																												

01.07 Subsistence farmer cassava production and value addition project (cont.)

SSP/USD = 4

Project duration	Phase 1			Phase 2			Phase 3			Phase 4			Total																			
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000	USD '000	% to total				
4 FBO value addition training (300) (per diem)			180			180																					360	90	2%			
5 FBO value addition training (300) (transportation)			60			60																					120	30	1%			
6 FBO processing training by agro-dealer			60			60			60																		180	45	1%			
3 Equity investments																																
4 Provision of loans																																
5 Social assistance/donation (Emergency)																																
T total (SSP '000)	4,182	4,755	3,160	1,225	1,263	1,207	279	1,202	67	761																	18,100	4,525	100%			
T total (USD '000)	1,045	1,189	790	306	316	302	70	300	17	190																						
% to total	23%	26%	17%	7%	7%	7%	2%	7%	0%	4%																	100%					

Public sector project
Routine work by government
Private sector project
Routine work by private sector

2.4.8 Subsistence farmer peas and beans production project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Crop		
(2) Project name:	Subsistence farmers peas and beans production project		
(3) Project ID:	01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2015/16	Ending FY: 2019/20	Duration (years): 5
(5) Total investment:	SSP 14,763,000	USD 3,691,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		CR.SA5	Crop production	Table 2-3
(2) Government organisation:	12	MAF-PE	Directorate of Agriculture Production and Extension Service	Table 2-6
(3) Activity types:	203	SP-EX	Service delivery/infra. Dev.- Extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	X
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	X
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFPP	Eastern Flood Plains	
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:	<p>Currently, demand for peas and beans in South Sudan is met by mainly imports from Uganda. However, peas and beans grow widely in South Sudan: in Western and Central Equatoria, i.e. the Greenbelt zone; and, in Upper Nile, Warrap, Unity (which has become home to large numbers of IDPs, displaced by the ongoing conflict) and Western Bahr el Ghazal, i.e. the Nile Sobat River, Flood Plains and Ironstone Plateau zones. Mainly kidney beans are grown for own consumption, while cowpeas are used as a cash crop. Varieties seem to be limited but there is a range of further legumes that could be grown in the areas (pigeon peas, chick-peas, green grams and black grams).</p> <p>Peas and beans are a food security crop and would be a source of cash income in South Sudan. As a short-duration crop (2.5 -4 moths), they are key for helping to shorten seasonal food insecurity and for providing quick cash. Their early maturity and capacity to provide a range of food products (leaves as well as fresh pods and dry grain) also helps provide a more balanced diet. Peas and beans are excellent sources of protein, vitamins and essential minerals in addition to carbohydrate. They are a source of supplementary protein to daily diets based on cereals and starchy food for people who cannot regularly afford animal protein.</p> <p>Peas and beans are well suited to diverse environments and fit in various cropping systems owing to their wide adaptability, low input requirements, fast growth, nitrogen fixing and weed smothering ability. Their cultivation enriches the soil by adding nitrogen, and improves the physical, chemical and biological soil properties.</p> <p>In order for subsistence smallholder farmers to generate income from peas and beans production, they need to assess market demands. Thus, detailed market surveys will have to be carried out. To ensure that the farmers understand the market demand, it is necessary to facilitate linking with traders who can provide market opportunities and information for the target households. Since traders need a guaranteed supply in the right quality and quantity, farmers could meet this demand by organising farmer based organisations (FBOs) and shipping collectively.</p> <p>Farmers will also need access to extension services such as training on production and improving quality, as well as ameliorating their postharvest handling techniques. Pest management at the production and storage stage will have an important role to play too. This service could be provided by plant doctors who offer diagnostics and advice at mobile clinics, as mentioned in the <u>“National crop pests and diseases control project.”</u></p>
(2) Objectives:	<p>On a macro-level, the project will contribute to increasing South Sudan’s self-sufficiency and to reducing its dependency on imports. Moreover, it will contribute to improving the nutritional status of its population.</p> <p>On a micro-level, the project will assist in improving the livelihoods of target farmers, through helping them diversify and to develop additional sources of food, and potentially cash income. Linkages to the private sector (e.g. traders) will be fostered to support and nourish the private sector that is slowly developing in South Sudan. The project is going to take place in marginalized parts of the country to contribute to an equitable distribution of the benefits of CAMP implementation.</p>
(3) Overall description including temporal and spatial extent of project:	<p>The project will last for 5 years and is intended to kick-start individual farmer private sector initiatives. Target farmers are 4,000, selected with a special focus on gender equality (i.e. 2,000 female and 2,000 male farmers). Target areas will be the livelihood zones of Nile Sobat River, Western Flood Plains, Ironstone Plateau and Greenbelt.</p> <p>Project reporting, monitoring and evaluation will include production of gender disaggregated data as well as gender specific results.</p>
(4) Component and activity structure:	<p>Component 1: Baseline surveys for situation assessment Component 2: Enhancement of market linkages Component 3: Improvement of production and marketing skills</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1: Baseline surveys for situation assessment</p> <p>Activity 1.1: Assess current status and varieties of peas and beans grown in target areas and social aspects (e.g. tribal conflicts, internally displaced persons, returnees, vulnerable groups affected by unrest, poverty index, gender disparity, youth, HIV, etc.)</p> <p>Activity 1.2: Carry out market surveys to assess market demands</p> <p>Activity 1.3: Select target farmers in accordance with selection criteria developed by stakeholders</p> <p>Activity 1.4: Conduct baseline survey on target farmers (e.g. yield, area harvested,</p>
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Items	Information
	<p>farming practices by gender, pest and diseases control, post-harvest handling and marketing) and their social aspects (e.g. tribal conflicts, land tenure, gender disparity, youth, HIV, etc.) Outputs: Varieties along with farmers' current production levels and market demand known, social aspects examined, 4000 target farmers (2000 females and 2000 males) selected with gender consideration, survey reports prepared</p> <p>Component 2: Enhancement of market linkages Activity 2.1: Link farmers to traders to facilitate gathering of market information, provide them with an outlet for their produce Activity 2.2: Facilitate establishment of farmer based organisations (FBOs) to realise collective shipping and stronger bargaining power Activity 2.3: Organize periodic roundtable discussions with representatives of FBOs and their buyers Outputs: linkages with traders established, farmer based organisations (FBOs) established, periodic meetings held with traders</p> <p>Component 3: Improvement of production and marketing skills Activity 3.1: Selection of appropriate varieties of peas and beans to be produced in collaboration with government research centres, traders and private agro-dealers Activity 3.2: Conduct training for AEOs and NGO staff on peas and beans production and marketing (e.g. line planting, use of fertiliser, effective weeding, pest and disease control, post-harvest handling, marketing, and gender) Activity 3.3: Train target farmers with a special emphasis on youth and women in improving their production and post-harvest handling and marketing skills Activity 3.4: Provide quality seeds of peas and beans to target farmers and provide routine extension services Activity 3.5: Link farmers with plant doctors if services are available Activity 3.6: Facilitate collective shipping by FBOs and communication with traders Activity 3.7: Carry out end of project surveys on target farmers to measure their achievements (e.g. yield, area harvested, farming practices by gender, pest and diseases control, post-harvest handling and marketing) Outputs: appropriate three types of seed varieties selected and those seeds provided, AEOs and NGO staff trained, target farmers trained (two weeks in-field training for 4000 farmers), routine extension activities implemented, end of the project survey conducted</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<ul style="list-style-type: none"> • Agriculture Extension Officers • NGO staff • Local consultants • Staff of government research centres • Traders • Agro-dealers
(2) Description of beneficiaries within the framework of the project:	<ul style="list-style-type: none"> • Female and male subsistence peas and beans producers who do not attain food self-sufficiency in their households (IDPs and other vulnerable households are given special emphasis) • Trained AEOs and NGO staff

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<p>Through improvement of productivity, most of the target subsistence producers and some of their neighbours will achieve household food self-sufficiency. This situation might greatly contribute to improvement of food and nutrition security. Especially conditions of nutrition security would be improved since peas and beans are so nutritious. In addition benefits of the project will be shared fairly among the household members (e.g. adults female and male, and children).</p>
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td> Negative: b Positive: c </td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: b Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: b Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • If not carefully planned and implemented, this project could have a potentially negative social and environmental impact. A do no harm approach will help to mitigate the social risks that could arise from the selection of target areas and farming households in case selection is perceived as being unfair. Therefore, a detailed peace and conflict analysis has to be carried out at project inception. Its results should be the starting point for any 		

Items	Information
	<p>detailed project design and target group selection. Equally important is not to underestimate the potentially negative environmental consequences. Though peas and beans have a positive effect on soil recovery, fertilisers and pesticides have to be handled with care. Sophisticated extension advice on production and pest management will help to avoid potential damage of soils and water resources.</p> <p>(Positive)</p> <ul style="list-style-type: none"> • If carefully planned this project can have both, positive social and environmental impacts; growing peas and beans contributes to food and especially nutrition security, plus provides an additional source of income; the positive social impacts of the project are expected to be numerous. Also in terms of environmental effects, the capacity of peas and beans to contribute to improving soils through nitrogen fixation is highly beneficial.

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • Income levels of target farmers • Amount and quality of peas and beans harvested and sold at local markets • Number of FBOs
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • Income levels of target farmers • Amount and quality of peas and beans harvested and sold at local and regional markets • Amount of collective shipping and its prices • Number of FBOs organised • Number of traders linked with FBOs
(3) Methods of measurement and sources of information:	Baseline and end of project surveys, CFSAM data, NBS census data
(4) Responsible parties for the monitoring and evaluation:	MAFCRD (Directorate of Agriculture Production and Extension Services) in collaboration with State Ministry of Agriculture will be the responsible for monitoring and evaluation. The farmers and extension workers will also work together to conduct self-evaluations.

2.7 Required human resources

(1) Principle of human resources management:	The government does not need to increase the number of government extension officers but will try to improve their efficiency of service delivery, by providing means of transport (bicycle or motorbike) and technical training as well as practical skills to work with gender issues, and introducing performance based evaluation.
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> • Project manager (one Director or Deputy Director) • Project staffs at national level (senior inspector level, 5 staff) for project management, procurement, logistics, monitoring • Project staff at state level (one in-charge for each target state, total 10 staff) • Extension agents (e.g. AEOs) (about 35 AEOs)
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Consultants in the field of:</p> <ul style="list-style-type: none"> • One project management (MSc or MA, 15-year experience) • One crop husbandry/extension expert (MSc or MA, 5-year experience) • One agriculture training and marketing expert (MSc, 5-year experience) • One social (including gender) and farmer survey expert (MSc or MA, 5-year experience) <p>Local consultants for baseline and end of project surveys will be hired. NGOs for extension activities will be contracted. Traders will be involved to disseminate information on market demands for subsistence farmers.</p>

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	M L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	<p>Expected risk level might be medium due to the following reasons.</p> <ul style="list-style-type: none"> • Insecurity of rural areas • Unfavourable conditions of access roads to reach beneficiaries • Conflicts or tensions among beneficiaries, and between beneficiaries and non-beneficiaries • Gender disparity (negative cultural and customary practices) • Delay of input delivery due to inappropriate timing of budget disbursement and limited number of extension staff who deliver inputs • Limited amount of available quality seeds • Limited capacity of AEOs and limited means of transport • Natural disasters (e.g. drought, flooding, and pests and diseases) • Manmade disasters (e.g. insecurity, raiding, and ethnic conflicts)

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	Selection of appropriate beneficiaries is one of the most sensitive parts of this project. Selection criteria should be discussed and decided with stakeholders in advance and the selection process should be transparent both for beneficiaries and stakeholders. Gender balance should also be considered for the selection.
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2.10 Routine operation and required resources after the completion of the project

Items	Information
<p>(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.</p>	<p>Continuous support is needed for the targeted farmers by extension agents both AEOs and NGO staff. If extension agents are government officers, the follow-up activities will be done by them as routine work with minimum cost (fuel for motorbike and some inputs).</p> <p>If extension agents are NGO staff, salary and necessary costs would be required.</p>

2.4.9 Subsistence farmer groundnut production and value addition project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Crop		
(2) Project name:	Subsistence farmer groundnut production and value addition project		
(3) Project ID:	01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2015/16	Ending FY: 2024/25	Duration (years): 10
(5) Total investment:	SSP 16,045,000	USD 4,011,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		CR.SA5	Crop production	Table 2-3
(2) Government organisation:	03	MAF-CO	Directorate of Cooperative development	Table 2-6
	12	MAF-PE	Directorate of Production and Extension Services	Table 2-6
(3) Activity types:	203	SP-EX	Service delivery/infra. dev. – Extension and training	Table 2-12
	205	SP-CR	Service delivery/infra. dev. – Provision of credit	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	X
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	
	72	JG	Jonglei State	
	73	UT	Unity State	
	81	WA	Warrap State	
	82	NB	Northern Bahr el Ghazal State	
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	
	93	EE	Eastern Equatoria State	
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	X
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	X
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	X
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income		

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>Groundnut is a very important cash crop in South Sudan, which is also a main staple and is grown by many households throughout the country. Groundnut production in South Sudan is practised mainly by smallholder farmers.</p> <p>Field sizes average 2 feddan. Yields of groundnut are much below potential. It is estimated that 500kg/feddan (1.2Mt/ha) is a good yield for groundnut in reasonable rain fed conditions. This can be as low as 200kg/feddan (less than 0.5Mt/ha) in poor rainfed conditions. Groundnut is planted at the beginning of the rainy season and harvested after four months. In the Greenbelt, and possibly the Ironstone Plateau, it can be planted and harvested twice a year.</p> <p>The selection of specific soil types is more important in groundnut production than in most other crops because of the direct influence of soil type on harvest losses. Weed control and clear space between the rows of groundnut allows efficient use of a hoe to harvest. When the groundnut is removed from soil at harvest, moisture content usually exceeds 40%. Thus proper post-harvest handling, especially drying, is crucial to ensure safe storage of the groundnut for further utilization.</p> <p>Current consumption of groundnut is mainly as a paste (peanut butter), and also as a roasted nut, but so far oil extraction is not done locally. The margins for the farm-gate product (unshelled groundnut) are fairly small. Sales prices are relatively high for groundnut due to high input costs. Especially, labour costs are almost double costs for cassava or maize. Costs for labour, seeds and tools for groundnut leave small margins. In low cost production, i.e. with no or little seed purchases, and no fertilizer applied, cultivation may even result in losses. Hence, increasing production levels through ensuring increased access to and use of higher yielding seed varieties and fertilizers, and better tools, and equipment is crucial to ensuring profitability of production.</p> <p>Prices are strongly dependent on the variety. The groundnut cultivar being used generally is the White Beauty. It is popular for its hardiness and apparent tolerance to soil types and conditions, but it is neither the best with regard to yield levels, nor is it the best for oil production. Higher priced varieties (e.g. Red Beauty) are more prone to disease, and more difficult to cultivate which requires training for farmers.</p> <p>Trade in groundnut is dominated by many small traders. The crop is bulked by the traders and transported in large trucks in the shell to urban areas. Shelled nuts of good quality fetch substantially higher prices than unshelled. Traders margins are around 10-15%. Wholesale traders import large quantities of groundnut to South Sudan from Sudan; only small amounts of groundnut are imported from Uganda. The market for unshelled and shelled groundnut is strong, but it is not likely that it will grow substantially. The main potential lies in value addition through producing paste, and especially in import substitution through local extraction of groundnut oil. The residue of extraction, the cake can be sold and used as high-quality animal and poultry feeds.</p> <p>First, the project will address the issue of productivity (vertical expansion) through better farming methods and use of higher yielding seed varieties. This requires training and access to better tools and equipment and higher yielding seed varieties. Secondly, the project will focus on value-addition through processing. Therefore, the project assumes that a micro-finance institution will be giving out small loans to Farmer Based Organisations (FBOs) to acquire processing equipment, e.g. shellers, mincer, groundnut paste makers, and oil expellers/pressers to enable farmers to benefit from value addition. Thirdly, the project will address the challenge of market access. It will link producers with traders of groundnut products for human consumption as well as animal feed.</p> <p>Note: contents of justification are mainly cited from "GIZ. May 2011. Appraisal analysis and selection of agro-based value chains in South Sudan"</p>
(2) Objectives:	<p>This project aims at achieving economic growth and reducing food insecurity by increasing income levels of farmers through adding value, i.e. groundnut processing. It aims at contributing to commercialising small holder farming in South Sudan.</p>
(3) Overall description including temporal and spatial extent of project:	<p>The project will cover the groundnut producing areas that allow for two harvests, i.e. the Greenbelt and Ironstone Plateau. The project will target 3000 (about 1,500 females and 1,500 males) subsistence groundnut farmers with the involvement of at least 20 small agro-dealers and 10 groundnut traders.</p> <p>Substantial cooperation potential exists: other DPs have been working on establishing farmer based organisations (FBOs) and supporting these groups to increase their groundnut production levels in the Greenbelt.</p>

Items	Information
(4) Component structure:	<p>In principle, the project consists of 3 components. 1. Support to the formation of FBOs (farmer groups, associations, cooperatives), 2. Support to raising productivity, 3. Introduction of simple processing methods for groundnut and improvement of access to markets.</p> <p>Established farmer groups, who have in the past received assistance from DPs and through the support, already managed to increase yields to a reasonable level (i.e. around 500kg/feddan), will not be beneficiaries of the activities carried out under component 1.</p> <p>Component 1: Support to the formation/promotion of farmer based organisations (farmer groups, association, cooperatives) Component 2: Support to increasing productivity Component 3: Introduction of simple processing methods for groundnut and improvement of access to markets</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Support to the formation/promotion of FBOs (farmer groups, association, cooperatives)</p> <p>Activity 1.1: Develop criteria for selecting farmers (already engaged in groundnut production, similar land size and yields, similar socio-economic status, physical proximity to each other and to markets, at least 50% women, 50% youths, etc.)</p> <p>Activity 1.2: Conduct social assessment in the target areas to ensure selection of participants does not increase the risk of conflict and gender disparity (e.g. tribal conflicts, land tenure, gender disparity, youth, HIV, etc.)</p> <p>Activity 1.3: Carry out survey to select potential members of groups/associations/cooperatives</p> <p>Outputs 1.2, 1.3: survey reports prepared</p> <p>Activity 1.4: Organise meeting with potential members to discuss approach and objectives of the project and obtain commitment to participation</p> <p>Outputs: 100 meetings held (1 day meeting, need transport cost for participants)</p> <p>Activity 1.5: Assists groups in setting up an organisational structure and (in case existing farmer groups opt for becoming a cooperative or registered association) with the registration process by Cooperative Offices (COs)</p> <p>Outputs: 100-150 farmer groups organised, 10 COs trained</p> <p>Component 2: Support to increasing productivity</p> <p>Activity 2.1: Carry-out baseline survey on target FBOs (e.g. yield, area harvested, farming practices by gender, pest and diseases control, post-harvest handling, processing and marketing)</p> <p>Outputs: Survey report prepared</p> <p>Activity 2.2: Conduct training for Agriculture Extension Officers (AEOs) on groundnut production methods, soil management, weed control, pests and diseases control and post-harvest handling, processing and marketing</p> <p>Outputs: 30 AEOs trained and able to assist groundnut farmers</p> <p>Activity 2.3: Provide training for FBO representatives (Training of Trainers on production methods, soil management, weed control, pests and diseases control and post-harvest handling through on-farm training)</p> <p>Outputs: 300 representatives (about 150 females and 150 males) of groundnut farmers trained</p> <p>Activity 2.4: Provide training to FBO members by trained farmers with support of AEOs</p> <p>Outputs: 2700 farmers trained</p> <p>Activity 2.5: Provide improved varieties' seeds</p> <p>Outputs: 3000 farmers received improved seeds</p> <p>Activity 2.6: Conduct follow-up activities by AEOs</p> <p>Outputs: bi-weekly monitoring conducted for 100-150 groups by 30 AEOs</p> <p>Activity 2.7: Carry-out surveys to assess yield levels by farmers and AEOs</p> <p>Outputs: Survey reports prepared to measure impact of project</p> <p>Component 3: Introduction of simple processing methods for groundnut and improvement of access to markets</p> <p>Activity 3.1: Carry-out market surveys to assess demand for and prices of groundnut processed products (un-shelled, paste, roasted and oil extraction)</p> <p>Outputs: survey reports prepared including groundnut products with the most value added</p> <p>Activity 3.2: Provide training to enable FBOs to select processing methods based on expected return on investment or to enhance linkages with small local processors</p> <p>Outputs: 300 representatives (about 150 females and 150 males) of groundnut farmers able to select value added products</p> <p>Activity 3.3: Facilitate access to micro-finance institutions providing small loans to FBOs</p> <p>Outputs: some FBOs obtain loans</p>
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Items	Information
	<p>Activity 3.4: Facilitate access to processing equipment Outputs: Processing equipment purchased by FBOs</p> <p>Activity 3.5: Provide training on operation and maintenance of processing machines Outputs: 100 (about 50 females and 50 males) FBO representatives able to use processing machines</p> <p>Activity 3.6: Provide training on quality control (including sanitation), packaging and transport of final products Outputs: 100 (about 50 females and 50 males) FBO representatives producing quality value added products</p> <p>Activity 3.7: Facilitate establishment of linkages with small processors and traders Outputs: Traders and processors linked with FBOs who can sell their products</p> <p>Activity 3.8: Carry out survey to assess volumes of groundnut processed and produce sold Outputs: Survey reports prepared to measure impact of project</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<p>Government: AEOs, COs, training centre staff, target state and county government officials, and national government officials</p> <p>Private sector: agro-dealers, processors, and traders</p> <p>Others: DP hired consultants (local and international)</p>
(2) Description of beneficiaries within the framework of the project:	<p>Subsistence groundnut producers and their family members</p> <p>FBO representatives in terms of business management skills development</p> <p>AEOs and COs capacitated by training courses</p> <p>Traders of groundnut and processed products (roasted and paste groundnut, and oil extraction)</p>

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	Increased productivity and introduction of simple processing methods leads to increased income and thereby contributes to food and nutrition security through diet diversity
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<p>Project:</p> <p>Negative: b Positive: c</p> <p>a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society</p>
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> The project's potentially negative effect on the environment through mono-cropping will be mitigated by encouraging intercropping with cassava The selection of beneficiaries might cause social tensions, therefore selection criteria are based on do-no-harm principles; Peace and conflict assessments are carried out, covering all target areas to make sure that social tensions are not aggravated by the project's interventions. <p>(Positive)</p> <ul style="list-style-type: none"> The additional income generated through the project will reduce food insecurity and contribute positively to nutrition outcomes as it provides access to food previously not consumed, thereby increasing diet diversity.

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	Average yields of 250kg/feddan (0.6Mt/ha) at household level are not sufficient for groundnut production to be a profitable business; low levels of yields and lack of collective action prevent farmers from making the required investments for embarking on processing.
(2) Measurable indicators and situation at the end point:	Yields of groundnut grown have increased to 500kg/feddan (1.2Mt/ha); Basic processing is carried-out and sufficient produce is sold to render operations profitable
(3) Methods of measurement and sources of information:	Surveys carried-out within component 1, 2 and 3, CFSAM and NHBS data
(4) Responsible parties for the monitoring and evaluation:	FBOs, AEOs, COs, target county and state government officials, experts of DP

2.7 Required human resources

(1) Principle of human resources management:	<p>Oversight by public sector (state government), implementation jointly by DP and private sector</p> <p>The government does not need to increase the number of AEOs but tries to improve their efficiency of service delivery by providing means of transport (bicycle or motorbike) and technical training, and introducing performance based evaluation.</p>
(2) Required human resources in the public sector (Positions,	<ul style="list-style-type: none"> Project manager (one Director or Deputy Director) at MAFCRD Project staff at national level (senior inspector level, 2 staff) for project management,

Items	Information
grades and numbers):	procurement, logistics, monitoring • Project staff at state level (2 in-charge for each target state, total 6 staff) • AEOs (30 staff) and COs (10 staff)
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	Consultants in the field of: • 1. One project management (Master degree, 15-years experience) • 2. One groundnut production expert (MSc or MA, 10-years experience) • 3. One extension and training expert (MSc or MA, 5-years experience) • 4. One value-chain development (MSc or MA, 5-years experience) Local consultants for baseline and end-line surveys Private agro-dealers, processors, traders

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	<table border="1"> <tr> <td>M</td> <td>L: Low</td> <td>M: Medium</td> <td>H: High</td> <td>(select an indicator from the list)</td> </tr> </table>	M	L: Low	M: Medium	H: High	(select an indicator from the list)
M	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	Expected risk level might be high due to the following reasons. <ul style="list-style-type: none"> • Outbreak of pests and diseases of groundnut • Limited amount of available quality seeds • Insecurity of target areas • Unfavourable conditions of access roads to reach beneficiaries • Conflicts or tensions among beneficiaries, and between beneficiaries and non-beneficiaries • Gender disparity (negative cultural and customary practices) • Delay of input delivery due to inappropriate timing of budget disbursement and limited number of AEOs who deliver inputs • Limited capacity of AEOs and limited means of transport • Natural disasters (e.g. drought and flooding) • Manmade disasters (e.g. insecurity, raiding, and ethnic conflicts) 					

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	In case the current situation of instability and insecurity does not improve, project implementation is at risk. Risks will then be manifested in various problems: <ul style="list-style-type: none"> • Farming activities disrupted • Infrastructure still dilapidated and access to markets by roads limited • Access to input inexistent/limited In addition selection of appropriate beneficiaries is one of the most sensitive parts of this project. Selection criteria should be discussed and decided with stakeholders in advance and selection process should be transparent both for beneficiaries and stakeholders. Gender balance should also be considered for the selection.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	Continuous support is needed for the targeted farmers by AEOs. The follow-up activities will be done by AEOs as a routine work with minimum cost (fuel for motorbike and some inputs).
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2.4.10 Enhancement of animal power utilisation project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Crop		
(2) Project name:	Enhancement of animal power utilisation project		
(3) Project ID:	0 1 1 0 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2015/16	Ending FY: 2024/25	Duration (years): 10
(5) Total investment:	SSP 8,233,000	USD 2,058,000	Note: Not including recurrent cost

1.2 Project characteristics:

	Code	Abbreviation	Description	Reference
(1) Subsector area:		CR.SA7	Mechanisation and animal power	Table 2-3
(2) Government organisation:	12	MAF-PE	Directorate of Agriculture Production and Extension Services	Table 2-6
(3) Activity types:	203	SP-EX	Service delivery/infra. dev.-Extension and training	Table 2-12

1.3 Project characteristics:

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	X
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFPP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income		

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>The use of mechanization on farms has the possibility of increased efficiency, decreased labor, maximization of land use, and a potential of increased economic return. There are two main types of mechanization for farms. These are mechanization through the use of machines (tractors, implements, etc.) and mechanization through the use of draft animal power. In South Sudan mechanization use on farmland, both machine and draft animal, is severely underutilized. Developing countries all over the world suffer from underutilization of mechanization on farmland. The biggest reason is the high cost associated with mechanization, the lack of adequate training, lack of experienced mechanics to provide routine maintenance repair on equipment, and an unavailable replacement part supply chain. Tractors cost tens of thousands of dollars and even used tractors will cost \$10,000 or more. Then there is the extra cost of purchasing implements to be utilized with tractors. Implements include mechanized cultivators, plows, harrows, seeders, fertilizer spreaders, and tank sprayers. These implements add additional thousands of dollars to the costs associated with tractor mechanization. Another major cost with tractors is fuel. Due to these high costs farmers across the globe utilize the same type of mechanization that has been used for thousands of years. That mechanization is draft animal power.</p> <p>Draft animal power is substantially less expensive than tractor power. Animals not only are less expensive than tractors but they also can utilize sustainable crops, rangeland, and grasses for feed instead of having to utilize diesel fuel as is the case with tractors. Animals are a much more environmentally friendly and sustainable source of mechanization. Animals do not require “spare parts” and the implements and equipment used in draft animal power is low maintenance and does not require highly trained mechanics. Furthermore, draft animal manure is utilized as fertilizer to improve soil fertility. Roads are rare in South Sudan. For tractors to be transported from farm to farm good roads are needed. Oxen don’t need good roads for travelling. This is another important benefit for subsistence farmers in South Sudan.</p> <p>Draft animal equipment is readily available from many countries in Africa including Kenya, Nigeria, Zimbabwe, Namibia, and Egypt. Animals utilized in draft power include horses, oxen, and mules. In South Sudan the most common animal used in farm mechanization is the ox (oxen is plural for ox). Oxen are cattle that have been trained as draft animals. They are generally castrated male cattle which are also known as steers or bullocks. South Sudan has one of the highest cattle populations in Africa. Finding cattle to utilize as draft animals is definitely not a constraint in South Sudan. In addition to providing draft power, cattle will provide meat and milk for farmers.</p> <p>There is a concept known as conservation agriculture technology that is growing in popularity. The United Nations Food and Agriculture Organization (FAO) strongly promotes this concept as it has great advantages for small land owner farmers. FAO states that conservation agriculture improves the livelihoods of farmers through the application of 3 principles: minimal soil disturbance; permanent soil cover; crop rotations. Conservation agriculture used in conjunction with animal power mechanization has the potential to greatly decrease capital investment yet improve the economic conditions of small land owner farmers in South Sudan.</p>
(2) Objectives:	<p>The objectives of this project include:</p> <ul style="list-style-type: none"> • Increasing awareness of draft animal power advantages for South Sudanese farmers. • Provide technical assistance to farmers through training programs taught by competent agricultural extension officers (AEOs). After training is provided, routine follow up technical assistance would be provided by extension specialists. • Provide training to farmers in the area of conservation agriculture technology.
(3) Overall description including temporal and spatial extent of project:	<p>According to the CAMP Situation Analysis Report (December 2013) in Lakes State, ox ploughing was introduced by NGOs and rapidly adopted compared to other states since the soil type (sandy soil) is suitable for ox ploughing. Also in the Situation Analysis Report it was stated that in April 2013 a plough suitable for ox power imported from Kenya cost 950 SSP. Indeed this is a substantial difference in the cost of a tractor costing tens of thousands of dollars. The success in Lakes State should be advertised in other states and training courses offered by extension specialists to help those farmers wanting to utilize animal draft power. The Ministry of Agriculture must adopt policies that are conducive for the import of draft animal equipment. Difficult import customs procedures and high taxes for equipment dealers will have an adverse effect on the adoption of animal draft power. The CAMP livestock subsector has a project that enhances existing demonstration farms (Enhancement of demonstration farms). One of the demonstration and training aspects of these farms could be the use of animal draft power for tilling, harrowing, and seeding. This animal power utilization project provides great linkage potential with the livestock subsector through demonstration farms, veterinary services, meat production, and milk production.</p>

Items	Information
(4) Component structure:	Component 1: Assessment and increase awareness Component 2: Creation of draft animal producer associations Component 3: Training and program development

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1: Assessment and increase awareness</p> <p>Activity 1.1: An assessment team consisting of international and national specialists will conduct a 6 month assessment of the utilization of farm mechanization using animal power as well as the interest of subsistence farmers in adopting animal power technology. During the time the assessment is being conducted this same team will create awareness in other states of the success had in Lakes State. A list of groups interested in forming draft animal producer associations will also be recorded for later use.</p> <p>Outputs: Up to date knowledge of farm mechanization using animal power. List of farmers interested in this.</p> <p>The assessment team will consist of the following:</p> <ul style="list-style-type: none"> • 1- international assessment consultant • 2- MAFCRD extension officers with experience in farm mechanization • This assessment team will take 6 months to gather data, analyse results, and publish an assessment document. During these same 6 months an awareness campaign concerning animal draft power will be conducted by the assessment team with a recorded list of those individuals interested in starting producer associations. The assessment and awareness campaign will take place in all 10 states. <p>Component 2: Creation of draft animal producer associations</p> <p>Activity 2.1: A team consisting of international and national specialists will take the recorded list of interested farmers provided by the assessment team and work to form registered draft animal producer associations.</p> <p>Outputs: Registered draft animal producer associations. At least 2 trips will be made to each state by the association development team (20 trips total). The association development team will consist of the following people:</p> <ul style="list-style-type: none"> • 1- international consultant specializing in producer association development. • 2- MAFCRD extension officers with experience in farm mechanization • 10- AEOs in states (1 per state). • This output will take 6 months to complete. A state extension specialist would only be utilized when the main association team visits the state where that particular state specialist is assigned. <p>Component 3: Training and program development</p> <p>Activity 3.1: A training team consisting of international and national consultants will create training curriculum on the following subjects: advantages and disadvantages of animal draft power; type of equipment used in animal draft mechanization; methods of ploughing, harrowing, and seeding utilizing animal draft power; draft animal nutrition; draft animal health care; fattening of calves from draft animals; sanitary milking procedures for draft animals; utilizing conservation agriculture technology in conjunction with animal draft power; creating by-laws for producer associations; producer association operating procedures; and utilizing producer associations to better economic returns.</p> <p>Outputs: Farmers trained in the use of draft animals and organised in producer associations.</p> <p>The training team will consist of the following</p> <ul style="list-style-type: none"> • 1- international producer association consultant • 1- international draft animal consultant • 1- international livestock consultant • 2- MAFCRD extension officers with experience in farm mechanization • 10- AEOs in states • Approximately 50 AEOs at county level. These AEOs at county level would only be utilized when trainings are taking place in the county or adjoining counties where they are assigned and/or reside. • The team national team consisting of the 3 international consultants and 2 MAFCRD officers will take 3 months to create the training curriculum. Once the training curriculum is developed then training will take place for each of the newly developed draft animal producer associations. It is expected that there will be at least 1 draft animal producer association in each state. <p>Approximate training schedule:</p> <ul style="list-style-type: none"> • Approximately 50 farmers per state including 1 AEO at state level and 5 AEOs at county level, total would be approximately 56 people per state. Initial training would take place for 5 days, 8 hours per day. The initial training would take
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Items	Information
	<p>place once in each state. After all the states have received the initial training, a second training phase would take place again consisting of 5 days, 8 hours per day for each of the 10 states. The first state trained during the initial training would be the same state where the second phase of training would begin.</p> <ul style="list-style-type: none"> • Total training time for both initial and second phase training would be 6 months. • Once the AEOs at state and county levels are trained by the international and national team they would then be expected to provide follow up training and routine technical assistance to farmers.

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	Service providers would be international consultants with experience in conducting surveys and/or assessments; organizing producer associations; extensive experience with draft animal technology, and livestock experience. From the public sector national MAFCRD extension officers with extensive experience in farm mechanization would be utilized along with AEOs at state and county levels.
(2) Description of beneficiaries within the framework of the project:	Primary beneficiaries are subsistence farmers who will benefit from the low cost, decreased labour, and possible increased yields of utilizing animal draft power. Secondary beneficiaries are equipment dealers and farm input suppliers that would benefit from increased sales of draft animal implements and equipment.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	Subsistence farmers with no access to tractor mechanization will benefit from the low capital investment, sustainability, decreased labour, increased yield, and household food security that can be realized through utilizing animal draft power.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: a</td> <td>Project:</td> </tr> <tr> <td>Positive: d</td> <td>a: is likely to have minimal or little impact on the environment and/or society</td> </tr> <tr> <td></td> <td>b: may have an impact on the environment and/or society</td> </tr> <tr> <td></td> <td>c: is likely to have a significant impact on the environment and/or society</td> </tr> <tr> <td></td> <td>d: will have a significant impact on the environment and/or society</td> </tr> </table>	Negative: a	Project:	Positive: d	a: is likely to have minimal or little impact on the environment and/or society		b: may have an impact on the environment and/or society		c: is likely to have a significant impact on the environment and/or society		d: will have a significant impact on the environment and/or society
Negative: a	Project:										
Positive: d	a: is likely to have minimal or little impact on the environment and/or society										
	b: may have an impact on the environment and/or society										
	c: is likely to have a significant impact on the environment and/or society										
	d: will have a significant impact on the environment and/or society										
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • No predicted negative outcome from this project. <p>(Positive)</p> <ul style="list-style-type: none"> • Increased capacity for small land holder farmers to increase yields, increase incomes, and provide household food security through the use of animal draft power. 										

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	Inadequate data on farmers utilizing animal draft power.
(2) Measurable indicators and situation at the end point:	Number of farmers trained and adopting animal draft power.
(3) Methods of measurement and sources of information:	Registered producer association records, training attendance sheets, annual reports from state and county AEOs.
(4) Responsible parties for the monitoring and evaluation:	Directorate of Agriculture Production and Extension services- Department of Agricultural Mechanization and Department of Extension Services

2.7 Required human resources

(1) Principle of human resources management:	International consultants with at least a Master's degree would be needed for providing technical assistance in the form of conducting assessments, organizing producer associations, draft animal technology, and livestock production. Mid-career level MAFCRD extension officers at the national level and entry level to mid-level state and county level would be needed at the state and local levels.
(2) Required human resources in the public sector (Positions, grades and numbers):	Public sector human resources would consist of the following: <ul style="list-style-type: none"> • 2- MAFCRD officers with experience in farm mechanization and extension work (mid-level specialists) • 10- AEOs in states (entry or mid-level specialists) • Approximately 50 AEOs at county level (entry or mid-level specialists)
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<ul style="list-style-type: none"> • 1- international producer association consultant. 1 year assignment • 1- international draft animal consultant. 1 year assignment • 1- international livestock consultant. 1 year assignment • 1- international assessment consultant. 6 month assignment

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	M L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	<p>The risk associated with this project is medium due to the risk of training cattle to be draft animals (risk of being dragged, kicked, or gored).</p> <ul style="list-style-type: none"> • Farmers reluctant to use livestock as draft animals due to their cultural norms

Items	Information
	<ul style="list-style-type: none"> • Unsuitable soil types for ox plough • Insecurity (armed insurgence and ethnic clashes) at project sites and/or nearby areas • Unavailable animal traction implements and a few skilled welders for repairing the implements • Gender disparity (negative cultural and customary practices)

2.9 Other special considerations and/or notes

<p>(1) Other special considerations and/or notes:</p>	<p>Once demonstration farms in South Sudan are functioning, a section of each demonstration farm should exhibit animal draft power technology. AEOs should share the information with Community Health Animal Workers (CHAW) should ask for technical support from them.</p>
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2.10 Routine operation and required resources after the completion of the project

<p>(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.</p>	<p>Human resources (on-going):</p> <ul style="list-style-type: none"> • 2- MAFCRD officers with experience in farm mechanization and extension work (mid-level specialists) • 10- state AEOs (entry or mid-level specialists) • Approximately 50 AEOs at county level (entry or mid-level specialists) <p>Other on-going expenses:</p> <ul style="list-style-type: none"> • Laptops for each worker • Transportation allowance for workers to provide routine technical assistance to farmers in their assigned states and counties. • Communication allowances (cell phone and internet) • Routine office supplies and maintenance
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2.4.11 Promotion of integrated farming for risk reduction project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector	Crop		
(2) Project name:	Promotion of integrated farming for risk reduction project		
(3) Project ID:	0 1 1 1 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2015/16	Ending FY: 2019/20	Duration (years): 5
(5) Total investment:	SSP 21,693,000	USD 5,423,000	Note: Not including recurrent cost
(6) Name of this file (automatic):	CAMP Project profile format v9.1.docx		

1.2 Project characteristics:

	Code	Abbreviation	Description	Reference
(1) Subsector area:	CR.SA9		Production, research and management	Table 2-3
(2) Government organisation:	12	MAF-PE	Directorate of Agriculture Production and Extension Services	Table 2-6
(3) Activity types:	203	SP-EX	Service delivery and infrastructure development – Extension and training	Table 2-12

1.3 Project characteristics:

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	X
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	X
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income		

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

Integrated farming is an approach to integrate crop, livestock, fisheries, and forestry to increase yields, reduce risks of diseases, strengthen coping strategy, improve sustainability of farming, and reduce costs for chemical fertilisers and feeding for livestock. Integrated farming also helps farmers to increase their income sources if they diversify farming activities such as keeping livestock and fish. It requires wider knowledge and advanced skills for farming. It requires more management skills as well, but there are many considerable positive aspects.

In South Sudan, many farmers keep small ruminants, livestock, and cows depending on their financial capacity and availability of lands. It means that there is a potential for farmers to improve their farming practice to more integrated way. However, knowledge and skills of farmers for integration of farming is limited.

The majority of farmers in South Sudan are subsistence level with 1-3 feddans of land. Their primary crops grown are staple crops and limited amount of vegetables. Their volume of yield is limited and it needs to be increased. There could be several different ways to realise it, but integrated farming could be one of them to increase their yields and improve their profit level. Integrated farming could diversity income sources and it would reduce risks of seasonal food shortage. Thus, knowledge and skills integrated farming implementable in a limited size of farms with low cost would be helpful for the majority of the farmers.

Detailed methods and items for integration would be varied by areas based on characteristics of livelihood zones and farming practices as well as potentials. Thus, assessment needs to be conducted to identify the most effective methods considering available resources, climate conditions, financial and technical capacity of farmers in each area. Provision of training would be required for the concerned government officers and other service providers to promote integrated farming across the country.

(2) Objectives:

The objective of the project is to improve efficiency of farming and to reduce risks through promotion of integrated farming.

(3) Overall description including temporal and spatial extent of project:

In the beginning of the project, assessments to confirm needs and to identify effective methods for integrated farming based on characteristics of areas, livelihood zones, farming practices, and potentials need to be conducted. It needs to be conducted within 5 months and results should be shared among the concerned people.

Strategies and detailed plans need to be formulated with recommended methods for each geographical areas. These plans and strategies would be a basis to implement activities according to the results of the assessments and discussions. Methods of integrated farming should pay attention to risk reduction besides increase of yields and profitability. For example, in the northern parts of South Sudan, utilisation of livestock would be crucial to reduce risks in case of food shortages. Plans and strategies developed through this component should be introduced among the service providers such as officers of MAFCRD, state government, agricultural extension officers (AEOs), community development officers (CDOs), and cooperative officers (COs). Activities for this component are expected to be implemented by the early parts of the second year.

Preparation and provision of training would be conducted from the early parts of the second year to the end of the third year. The project would not conduct a large scale construction. Thus, existing infrastructure and/or group efforts may be required for some farmers to develop a required infrastructure to practice effective integrated farming. Activities for these components would be completed by the end of the fourth year.

Service providers would provide technical supports for farmers to practice integrated farming. Monitoring system will be established and conducted till the end of the project. The monitoring system needs to be incorporated in the government routine activities and budget also needs to be secured by the end of the project.

(4) Component and activity structure:

Component 1: Conduct baseline survey to confirm needs and discover effective approaches for integrated farming by areas and livelihood zones for development of strategy and plans for implementing integrated farming
 Component 2: Prepare and provide training for concerned government officers, community based extension workers, (CBEWs), and NGO staff
 Component 3: Selection of core farmers and capacity building for them
 Component 4: Support implementing integrated farming

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

Component 1: Conduct baseline survey to confirm needs and discover effective approaches for integrated farming by areas and livelihood zones for development of

Items	Information
	<p>strategy and plans for implementing integrated farming</p> <p>Activity 1.1: Conduct baseline survey includes assessment of needs, current situations, and effective approaches for integrated farming Outputs: Baseline survey report</p> <p>Activity 1.2: Identify the most effective integrated farming practices in each area and livelihood zone Outputs: The most effective integrated farming practices by area and livelihood zone identified</p> <p>Activity 1.3: Analyse results of the baseline survey and develop a strategy and a plan for implementing integrated farming Outputs: Strategies and plans developed to implement integrated farming</p> <p>Component 2: Prepare and provide training for concerned government officers, community based extension workers, (CBEWs), and NGO staff</p> <p>Activity 2.1: Develop course contents and materials for integrated farming Outputs: Training contents and materials developed, trainers practiced for training, 5 NGO trainers will be invited from different states. 2 trainers from 8 government training centres will be invited. 2 trainers from AMADI Training Centre in Western Equatoria state, and 2 trainers from Marial Lou Livestock Training Centre in Warrap state, 2 trainers from Kagelu Forestry Training Centre in Yei, 2 trainers from Padak Fisheries Training Centre in Bor will be invited. 1 trainer from Yei Agricultural Training Centre will also be invited.</p> <p>Activity 2.2 : Provide training for concerned government officers of national, state, county, payam officers, AEOs, CDOs, COs and Outputs: Trained government officers, AEOs, CDOs, and COs</p> <p>Activity 2.3: Provide training for CBEWs and NGO staff Outputs: Trained CBEWs, and NGO staff</p> <p>Component 3: Selection of core farmers and capacity building for them</p> <p>Activity 3.1: Develop criteria to select farmers who are willing to practice integrated farming Outputs: Criteria to select farmers</p> <p>Activity 3.2: Conduct social impact assessment on target sites to mitigate any negative impacts by selecting farmers and/or farmers' groups (e.g., tribal conflicts, land tenure issue, gender disparities, exclusion of youth, increase of HIV, etc.) Outputs: Social impact assessment report</p> <p>Activity 3.3: Select prospective farmers and/or farmers groups based on the criteria and hold meetings with them to explain about the project Outputs: 3,000 prospective farmers who understand the project purpose, activities, and outcomes through involvement with it</p> <p>Activity 3.4: Select core farmers and/or representatives of farmers' groups, associations, and/or cooperatives who are willing to cooperate with this project to organise appropriate forms of groups Outputs: Selected 1,000 targeted core farmers (Tribal balance and gender ratio is considered.)</p> <p>Activity 3.5: Provide training to selected core farmers about organizing a group, association and/or cooperative as well as fund or loan seeking and management skills Outputs: Trained 1,000 core farmers about establishment of farmer's group and fund management (These 1,000 core farmers are responsible for sharing information which they will learn with their group members and/or other farmers.)</p> <p>Activity 3.6: Provide training to selected core farmers about integrated farming Outputs: Trained 1,000 core farmers about integrated farming (These 1,000 core farmers are responsible for sharing information which they will learn with their group members and/or other farmers.)</p> <p>Component 4: Support implementing integrated farming</p> <p>Activity 4.1: Conduct follow up visit by AEOs, CDOs, COs, or CBEWs to provide consultation on integrated farming practice by farmers Outputs: 1,000 core farmers visited and obtained technical assistance by responsible AEOs, CDOs, COs, or CBEWs</p> <p>Activity 4.2: Provide technical support to seek and obtain loan and/or fund for farmers and/or a farmers' group to invest for integrated farming Outputs: Supported farmers to find a loan or a fund for their own integrated farming</p> <p>Activity 4.3: Conduct end of project survey Outputs : End of project survey report</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the

Directorate of Agriculture Production and Extension Services, state ministries of agriculture, AEOs, CDOs, COs, and CBEWs, Directorate of Forestry at MAFCRD, and

Items	Information		
framework of the project: (2) Description of beneficiaries within the framework of the project:	related Directorate of Ministry of Livestock and Fisheries Industries (MLFI) Farmers will be the major beneficiaries. Staff of MAFCRD, officers of state ministries of agriculture, AEOs, CDOs, COs, and CBEWs will also be beneficiaries because their knowledge and skills about integrated farming will be improved.		
2.4 Outcomes, impact and contributions to value added (i.e. economic growth)			
(1) Outcomes and impact:	Integrated farming is understood well by farmers and other stakeholders. Effective integrated farming suitable for the natural and environmental conditions in an area is practiced by farmers. Integrated farming would improve sustainability of farming and increase income sources. It would strengthen farmers' capacity to improve their yields as well as income levels. It would also enhance farmers' resilience for seasonal food shortage.		
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable) N/A		
2.5 Environmental and social impact, and mitigation measures			
(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td> Negative: c Positive: d </td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: c Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: c Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<table border="1"> <tr> <td> (Negative) • Integrated farming requires additional labour and some elements could require intensive labour. In South Sudan, Human resources are available across the country, but many labour forces are not accustomed to work intensively. At the same time, integrated farming should be efficiently done with intensive practice to increase a profit level. The most of the small scale subsistence farmers own and operate their farming with 1-3 feddans of farmland without hiring assistance due to high labour cost. Therefore, situations about labour forces and smallholders' farming practice may hinder promotion of integrated farming. Thus, methods of integrated farming with lighter labour intensiveness should be recommended. • If some farmers and/or farmers' groups decided to develop some infrastructure such as fishponds, it may affect the surrounding environment negatively. Keeping either livestock, small ruminants, or cows could affect the surrounding environment negatively as well. (Positive) • Integrated farming could enhance sustainability of farming. It could increase income sources and to improve yields. Owning and utilising livestock and small ruminants such as goats and sheep could enhance farmers' resilience to seasonal food shortages especially in northern parts of the country since there are not many alternatives exist for survival. Utilisation of manures and excrements as a fertiliser could reduce waste and cost. </td> </tr> </table>	(Negative) • Integrated farming requires additional labour and some elements could require intensive labour. In South Sudan, Human resources are available across the country, but many labour forces are not accustomed to work intensively. At the same time, integrated farming should be efficiently done with intensive practice to increase a profit level. The most of the small scale subsistence farmers own and operate their farming with 1-3 feddans of farmland without hiring assistance due to high labour cost. Therefore, situations about labour forces and smallholders' farming practice may hinder promotion of integrated farming. Thus, methods of integrated farming with lighter labour intensiveness should be recommended. • If some farmers and/or farmers' groups decided to develop some infrastructure such as fishponds, it may affect the surrounding environment negatively. Keeping either livestock, small ruminants, or cows could affect the surrounding environment negatively as well. (Positive) • Integrated farming could enhance sustainability of farming. It could increase income sources and to improve yields. Owning and utilising livestock and small ruminants such as goats and sheep could enhance farmers' resilience to seasonal food shortages especially in northern parts of the country since there are not many alternatives exist for survival. Utilisation of manures and excrements as a fertiliser could reduce waste and cost.	
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2.6 Monitoring and evaluation for impact measurement			
(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • Farmers' general knowledge and practice about integrated farming • Knowledge and skill levels about integrated farming by government officers includes AEOs, CDOs, and COs • Cases of integrated farming undertaken by NGOs 		
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • Farmers' knowledge and results of practice about integrated farming with technical support through the project • Knowledge and skill levels of government officers includes AEOs, CDOs, and COs about integrated farming • Knowledge and skill levels of CBEWs and NGOs about integrated farming • Number of integrated farming undertaken through the project • Successful cases of integrated farming and common factors behind them categorised by type of farmers and geographical areas 		
(3) Methods of measurement and sources of information:	Baseline survey report, social impact survey report, project records, training records, end of project survey report		
(4) Responsible parties for the monitoring and evaluation:	Directorate of Agriculture Production and Extension Services, and state ministries of agriculture		
2.7 Required human resources			
(1) Principle of human resources management:	Service providers need to understand well about integrated farming and they should also have appropriate skills to provide technical support to farmers. Farmers also need to commit to practice integrated farming even though it requires more labour, land, and resources. Officers from the Directorate of Forestry of MAFCRD, and Ministry of Livestock and Fisheries Industries should support the project technically.		
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> • Project manager from MAFCRD (one senior staff from the MAFCRD, Directorate of Agricultural Production and Extension Services, grade 4 or 5) • Project staff from MAFCRD (two staff, one staff from the Directorate of Agricultural Production and Extension Services, one staff from Directorate of Cooperative 		

Items	Information
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Development) for project detailed design, conduct of needs assessment, project implementation and management, logistics, and monitoring, etc.</p> <ul style="list-style-type: none"> • Senior inspector of extension and inspector of extension, grade 7 and 9, of State Ministry of Agriculture work with MAFCRD to implement the project as state focal points. • Training staff of government training centres will provide necessary training. <p>Consultants in the field of:</p> <ul style="list-style-type: none"> • Project manager (Master's degree, 15-year experience): One • Integrated farming/ crop/ horticulture specialist (BA or BSc or higher degrees, 10-years experience or more): One • Livestock specialist (BA or BSc, 10-years experience or more): One • Forestry specialist (BA or BSc, 10-years experience or more): One • Fisheries specialist (BA or BSc, 10-years experience or more): One • Farmers' organisation/agricultural extensions/ (BA or BSc, 10-years experience or more): One • Training/project coordinator (BA or BSc in Agriculture desirable, 3-year experience or more): One

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:

H	L: Low	M: Medium	H: High	(select an indicator from the list)
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(2) Explanation of expected risks:

	<ul style="list-style-type: none"> • Unfavourable weather conditions (late season, little rainfall, droughts, floods) • Outbreaks of pests and diseases • Possible difficulties to find sufficient numbers of farmers who can commit • Possible difficulties for farmers to secure funds to invest in procuring necessary materials and developing infrastructure • Insecurity (armed insurgence and ethnic clashes) at project sites and/or nearby areas
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2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:

	<p>This project is related to other subsectors such as forestry, livestock, and fisheries. Thus, communication with officers from Directorate of Forestry, MAFCRD, and concerned Directorates of MLFI to obtain technical support will be important to provide technically correct services. Intensity of integrated farming activities would be a critical point to increase outputs and income. Thus the most effective methods of integrated farming needs to be considered and developed by farmers' types, market needs, and characteristics of the livelihood zones.</p> <p>Availability of fund will be one of the most critical challenges for most of the target farmers to start and expand integrated farming. Hence, the project would need to support government service providers to provide technical support to the farmers to obtain a loan or a fund for implementing integrated farming.</p>
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.

	<p>Monitoring needs to be conducted to assess the current situation during and after the project period. Cost for monitoring activities should be internalised in a budget for the project. Periodically, officers from Directorate of Forestry, MAFCRD, and officers from concerned Directorates of MLFI should participate in monitoring to assess activity implementations and provide technical support to target farmers.</p>
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Part 3: Project cost estimation

Project duration	Cost group	SSPUSD = 4										Total	% to total														
		15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25			25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39
1 Management and operation of project																									19,620	4,905	90%
1 Deployment of government staff																									162	41	1%
1 Baseline survey (per diem)																									57	14	0%
2 Baseline survey (transportation)																									27	7	0%
3 Social impact assessment survey (per diem)																											
4 Social impact assessment survey (transportation)																									15	4	0%
5 End line survey (per diem)																									27	7	0%
6 End line survey (transportation)																									14	4	0%
2 Procurement of administrative services (contracted)																									13,590	3,398	63%
3 Procurement of professional services (contracted)																									3,150	788	15%
1 International consultant (project manager)																									2,700	675	12%
2 International consultant (integrated farming/crop/horticulture)																									1,350	338	6%
3 International consultant (livestock)																									1,350	338	6%
4 International consultant (forest)																									1,350	338	6%
5 International consultant (fisheries)																									1,800	450	8%
6 International consultant (farmers' organization/agricultural extension)																									1,890	473	9%
7 International consultant (training/project coordinator)																									5,295	1,324	24%
4 Implementation of staff training																									12	3	0%
1 Meeting for identification of integrated farming (per diem)																									9	2	0%
2 Meeting for identification of integrated farming (transportation)																									18	5	0%
3 Meeting for identification of integrated farming (per diem)																									169	42	1%
4 Workshop for development of training (per diem)																									75	19	0%
5 Workshop for development of training (transportation)																									11	3	0%
6 Workshop for development of training (per diem)																									2,000	500	9%
7 Trainings for 1,200 government officers (per diem)																									200	50	1%
8 Trainings for 1,200 government officers (transportation)																									2,400	600	11%
9 Trainings for 2,100 CBEWs (per diem)																									400	100	2%
10 Trainings for 2,100 CBEWs (transportation)																											
5 Implementation of research, studies and surveys																									573	143	3%
6 Delivery of extension and training services to the private sector																									8	2	0%
7 Operation and maintenance																									8	2	0%
1 Fuels for baseline survey																									8	2	0%
2 Fuels for social impact assessment																									7	2	0%
3 Fuels for one day meeting for prospective farmers																									3	1	0%
4 Fuels for one day meeting for core farmers																									270	135	2%
5 Fuels for follow up selected core farmers																									8	2	0%
6 Fuels for end line survey																											
2 Construction of infrastructure and procurement of equipment																									573	143	3%
1 Construction of office buildings																									8	2	0%
1 Construction of research, training and other specialized buildings																									8	2	0%
3 Construction of feeder roads																									7	2	0%
1 Construction of production, market and transportation facilities																									3	1	0%
5 Acquisition of land																									540	135	2%
6 Procurement of vehicles																									8	2	0%

01.11 Promotion of integrated farming for risk reduction project (cont.)

Project duration	SSP/USD = 4												Total	% to total															
	Phase 1		Phase 2		Phase 3		Phase 4				SSP '000 USD '000	% to total																	
Cost group	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000	% to total		
7 Procurement of equipment																													
3 Subsidies, equity and loans																													
1 Provision of cash and/or in-kind subsidies																													
2 Provision of training services to the private sector																													
1 Trainings for NGO staff (per diem)																													
2 Trainings for NGO staff (transportation)																													
3 One day meeting for prospective farmers (transportation)																													
4 One day meeting for core farmers (transportation)																													
5 Trainings for core farmers (per diem)																													
6 Trainings for core farmers (transportation)																													
3 Equity investments																													
4 Provision of loans																													
5 Social assistance/donation (Emergency)																													
Total (SSP '000)	4,937	9,188	3,970	1,685	1,913																								
Total (USD '000)	1,234	2,297	993	421	478																								
% to total	23%	42%	18%	8%	9%																								

Public sector project
Routine work by government
Private sector project
Routine work by private sector

2.4.12 Farmers organisation support project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Crop		
(2) Project name:	Farmers organisation support project		
(3) Project ID:	0 1 1 2 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2015/16	Ending FY: 2019/20	Duration (years): 5
(5) Total investment:	SSP 14,049,000	USD 3,512,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		CR.SA11	Farmer organisation	Table 2-3
(2) Government organisation:	03	MAF-CO	Directorate of Cooperative Development	Table 2-6
	12	MAF-PE	Directorate of Agricultural Production and Extension	Table 2-6
(3) Activity types:	301	PS-PR	Private sector - Production	Table 2-12
	203	SP-EX	Service delivery/infra.dev.-Extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	X
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income	X	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>The majority of South Sudanese people (about 85%) live in rural areas and they depend on agriculture for their livelihoods and as the main source of income.</p> <p>Smallholder farmers represent the majority of farmers. They have limited resources, practice subsistence farming and cultivate less than one hectare. Consequently agricultural production and productivity remain very low. There is a high incidence of poverty and food insecurity in most rural areas of South Sudan, especially among the smallholder farmer's households.</p> <p>Farmer's organisations such as farmer groups, associations, and formally registered cooperatives can play a vital role in driving agricultural transformation. Group farming can help farmers to increase their profits by facilitating access to markets and credit, reducing transaction costs through realising economies of scale, fostering peer-learning and increasing negotiating power.</p> <p>Even though some farmers in South Sudan are organized into large and small groups, their effectiveness for agricultural development and food security is still very poor.</p> <p>Many factors contribute to the weakness of these organisations:</p> <ul style="list-style-type: none"> • Limited organisational and technical management skills • Limited participation of the majority of farmers in the organisations • Poor coordination mechanisms among members of these organisations • Limited leadership and management skills • Poor/weak business skills and business acumen • Limited government extension services delivery • Poor access to financial services • Poor access to markets • Poor market information <p>The current crisis which started in December 2013 has also brought another challenge: most farmer organisations in Upper Nile and Unity states have been seriously affected by the violence and ensuing displacement. Apart from the physical damages, the persistent violence these communities experience has psychological implications. Years of conflict have created distrust among and inside communities.</p> <p>To achieve food security and reduce poverty in rural areas, one of the most important activities is to strengthen farmer groups by assisting them in rebuilding trust and supporting the organisational, managerial, technical and business skills of farmers groups through provision of regular extension services and advice.</p> <p>Because of the significant importance of these organisations for transforming agriculture, reducing rural poverty, and improving food security, government and DPs should join hands in supporting these organisations.</p> <p>They have to embark on trust-building activities and increasing farmers' capacity through training. Training needs pertain to: organisational development and managerial/leadership skills, financial record and bookkeeping, business plan development, developing business acumen, processing market information, agricultural production and post-harvest handling, pest management and support for formal registration as cooperatives.</p>
(2) Objectives:	<p>This project aims to:</p> <ul style="list-style-type: none"> • Engage in trust-building activities to enable the emergence of strong farmer groups • Assist farmer groups in strengthening their organisational capacity and in the formal registration process for cooperatives if desired by members • Enhance business acumen and skills in order to support farmer groups to run their operations as businesses, get access to markets and credit, hereby enabling investment • Contribute to rural economic growth and poverty reduction through the generation of additional income and employment opportunities • Conduct training to support productivity gains through improved knowledge in agricultural practices, pest management and post-harvest handling
(3) Overall description including temporal and spatial extent of project:	<p>This project will cover most of the rural areas of the 10 states of south Sudan, where the majority of smallholder farmers are based. It will focus on strengthening the organisational, technical and business skills of smallholder farmer groups. It will start in 2015 and cover 5 years by 2020.</p> <p>The project will encourage the participation of women to provide them with income opportunities, intended to gradually improve the socio-economic status of women.</p>

Items	Information
(4) Component and activity structure:	<p>Since the sustainability of agriculture in general depends on the inclusion of youth, special attention will be paid to encouraging them to join. The attractiveness of agriculture for the youth is largely determined by the business and job opportunities. Thus, national media campaigns will publicise the business opportunities to attract innovative youth.</p> <p>Component 1: Identification of target group and selection of beneficiaries Component 2: Capacity development for FBOs Component 3: Strengthening of government-farmer based organisations (FBOs) relations</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1: Identification of target group and selection of beneficiaries</p> <p>Activity 1.1: Carry out baseline surveys on existing farmer groups and social assessment with a special focus on tribal conflicts, land tenure, gender disparity, youth and environment issues Outputs: baseline studies in all 10 states; numbers, formal status, socio-economic situation of existing farmer organisations known</p> <p>Activity 1.2: Conduct training for cooperative officers (COs) Outputs: 5 COs per state (i.e. total 50 COs) trained on organisational development and managerial/leadership skills, financial record and bookkeeping, business plan development, marketing, gender and support for formal registration as cooperatives.</p> <p>Activity 1.2: Conduct workshops for participatory selection of beneficiaries Outputs: 3 workshops in each of the 10 states where at least 10 FBOs per state (minimum of 20 member households) have been selected in a participatory manner. Individual farmers capable and willing to form new groups identified and supported to create new organisations. A focus will be put on encouraging women's participation.</p> <p>Activity 1.3: Carry out inception meetings with representatives of target FBOs Outputs: In all 10 states, representatives of at least 10 FBOs are well-informed about the project activities and schedule, and their obligations.</p> <p>Activity 1.4: Identify or establish an executive board in each FBOs Outputs: Each FBO has an executive board and list of board members is submitted.</p> <p>Activity 1.5: Conduct training for FBO members to establish an M&E system Outputs: COs has trained 2 members per FBO and mechanisms of M&E have been installed in FBOs</p> <p>Component 2: Capacity development for FBOs</p> <p>Activity 2.1: Design and carry out trust-building workshops Outputs: each FBO has received at least 1 (depending on necessity) trust-building exercise.</p> <p>Activity 2.2: Conduct training for agriculture extension officers (AEOs) and NGO staff Outputs: 5 AEOs and 5 NGO staff per state (i.e. total 50 AEOs and 50 NGO staff) trained on organisational development and managerial/leadership skills, financial record and bookkeeping, business plan development, marketing, gender, agricultural production and post-harvest handling, and pest management.</p> <p>Activity 2.3: Conduct training of trainers (TOT) for FBO representatives (leaders) Outputs: 5 representatives per FBO (total more than 500) trained by COs and AEOs in collaboration with NGO staff.</p> <p>Activity 2.4: Conduct training for FBO members by trained leaders of FBOs Outputs: All target FBOs (more than 100) conduct training for their members, especially on financial record and bookkeeping, business plan development, marketing, gender, agricultural production and post-harvest handling, and pest management. A focus will be put on encouraging women's participation.</p> <p>Activity 2.5: Carry out a market survey to understand business environment in the FBO's areas and hold a business forum with stakeholders to establish strong linkages Outputs: Market survey carried out by each FBO with assistance of AEOs and NGOs; hold business forum with traders, agro-dealers, institutional buyers and financial institutions.</p> <p>Component 3: Strengthening of government-farmer based organisations (FBOs) relations</p> <p>Activity 3.1: Support FBOs to prepare and officially register as cooperatives Outputs: all interested FBOs are supported in the preparation for and formal registration as cooperatives</p> <p>Activity 3.2: Initiate public-private dialogue Outputs: in each state capital periodic meetings between FBO representatives and state government officers take place to discuss issues. (one day quarterly meeting held in each state)</p> <p>Activity 3.3: Develop programmes to attract youth to agribusiness Outputs: FBO representatives work together with state media representatives on the development of media campaigns (state radio) that seek to attract youth to agribusiness; leaflets and posters prepared.</p> <p>Activity 3.4: Conduct routine follow up and an end of project survey</p>
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Items	Information										
	Outputs: Periodic follow up is made by COs on organisational aspects and by AEOs and NGO staff on agronomic and business aspects. End of project surveys are conducted and able to clarified the results of the project.										
2.3 Service providers and beneficiaries											
(1) Description of service providers within the framework of the project:	Officers of national and state Ministries of Agriculture, AEOs, COs, representatives of FBOs as trainers for their members, traders, agro-dealers, institutional buyers and financial institutions										
(2) Description of beneficiaries within the framework of the project:	Existing and newly set-up FBOs; special attention will be put on encouraging women and youth participation, AEOs, COs										
2.4 Outcomes, impact and contributions to value added (i.e. economic growth)											
(1) Outcomes and impact:	Strong FBOs can play a vital role in transforming agriculture. The expected impact is that by way of professionalising their operations, they contribute to economic growth and to an enabling environment for small and medium scale business operations										
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)										
2.5 Environmental and social impact, and mitigation measures											
(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1" style="width: 100%;"> <tr> <td style="width: 20%;">Negative: b</td> <td>Project:</td> </tr> <tr> <td>Positive: d</td> <td>a: is likely to have minimal or little impact on the environment and/or society</td> </tr> <tr> <td></td> <td>b: may have an impact on the environment and/or society</td> </tr> <tr> <td></td> <td>c: is likely to have a significant impact on the environment and/or society</td> </tr> <tr> <td></td> <td>d: will have a significant impact on the environment and/or society</td> </tr> </table>	Negative: b	Project:	Positive: d	a: is likely to have minimal or little impact on the environment and/or society		b: may have an impact on the environment and/or society		c: is likely to have a significant impact on the environment and/or society		d: will have a significant impact on the environment and/or society
Negative: b	Project:										
Positive: d	a: is likely to have minimal or little impact on the environment and/or society										
	b: may have an impact on the environment and/or society										
	c: is likely to have a significant impact on the environment and/or society										
	d: will have a significant impact on the environment and/or society										
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> Attention has to be paid to avoid potential negative social effects (especially conflict over land), environmental degradation through inappropriate land clearing/reclaiming activities and excessive use of chemical fertilizers or pesticides. It is therefore strongly recommended to carry out a peace and conflict assessment as well as an environmental assessment as soon as potential target areas and beneficiaries have been identified. <p>(Positive)</p> <ul style="list-style-type: none"> The project will have great social and economic impact on smallholder farmers; it will generate income for most smallholder household and job opportunities, especially for youth and women. 										
2.6 Monitoring and evaluation for impact measurement											
(1) Measurable indicators and situation at a starting point:	Number, socio-economic and formal status of existing FBOs.										
(2) Measurable indicators and situation at the end point:	Number, socio-economic and formal status of existing FBOs, their sales volume, number of FBOs registered as cooperatives										
(3) Methods of measurement and sources of information:	Baseline survey, M&E reports, end of project survey										
(4) Responsible parties for the monitoring and evaluation:	M&E officer in FBOs, AEOs, COs, NGO staff and officials of state and national Ministries of Agriculture										
2.7 Required human resources											
(1) Principle of human resources management:	Qualified and trained personnel; areas of expertise: agriculture, business development, conflict mediation and trust building, media										
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> Project manager (one Director or Deputy Director) Project staff at national level (senior inspector level, 2 staff) for project management, procurement, logistics, monitoring Project staff at state level (two in-charges for each target state, total 20 staff) AEOs (50 staff) COs (50 staff) 										
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Consultants in the field of:</p> <ul style="list-style-type: none"> One project management and organisational management expert (Master degree, 15-years experience) One crop husbandry/extension expert (MSc or MA, 5-years experience) One business establishment expert (MSc or MA, 5-years experience) One social (including gender) and farmer survey expert (MSc or MA, 5-years experience) One media expert (MSc or MA, 5-years experience) <p>Local consultants for baseline and end of project surveys will be hired. 10 NGOs for extension activities are contracted.</p> <p>Traders, agro-dealers, institutional buyers and financial institutions will be involved to accelerate FBOs' business activities.</p>										

Items	Information
2.8 Risk assessment with respect to project objectives and resources to be applied	
(1) Expected level of risk:	M L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	<p>Expected risk level might be medium due to the following reasons.</p> <ul style="list-style-type: none"> • Insecurity of rural areas • Informal taxation and harassment of government officials • Weak legal framework • Unfavourable conditions of access roads to reach beneficiaries • Poor public services (e.g. electricity, water supply and communication) • Conflicts or tensions among beneficiaries, and between beneficiaries and non-beneficiaries • Gender disparity (negative cultural and customary practices) • Limited capacity of AEOs/COs and limited means of transport • Natural disasters (e.g. drought, flooding, bird pests, locusts and diseases) • Manmade disasters (e.g. insecurity, raiding, and ethnic conflicts)
2.9 Other special considerations and/or notes	
(1) Other special considerations and/or notes:	<p>Anti-corruption should be emphasised so as not to discourage business operations by FBOs. Participation of women and youth should be encouraged.</p>
2.10 Routine operation and required resources after the completion of the project	
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>AEOs and COs are expected to regularly visit FBOs that cannot pay for services of private service providers</p>

Part 3: Project cost estimation

Project duration	SSP/USD = 4										Total	% to total												
	Phase 1		Phase 2		Phase 3		Phase 4		Total															
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25			25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37
01.12 Farmers organisation support project	Cost group										11,353	2,838	81%											
1 Management and operation of project											160	40	1%											
1 Deployment of government staff											100	25	1%											
2 Procurement of administrative services (contracted)											60	15	0%											
1 Printing posters																								
2 Broadcast																								
3 Procurement of professional services (contracted)											10,352	2,588	74%											
1 International consultant (project management)											1,350	338	10%											
2 International consultant (crop/husbandry/extension)											756	189	5%											
3 International consultant (business establishment)											1,512	378	11%											
4 International consultant (social and farmer survey)											756	189	5%											
5 International consultant (media)											378	94	3%											
6 Local consultant (baseline and endline survey)											800	200	6%											
7 NGOs for extension activities											4,800	1,200	34%											
4 Implementation of staff training											750	188	5%											
1 Training for COs at states (venue)											50	13	0%											
2 Training for COs at states (transportation)											100	25	1%											
3 AEOs (and NGO) training at states (per diem)											500	125	4%											
4 AEOs (and NGO) training at states (transportation)											100	25	1%											
5 Implementation of research, studies and surveys											58	14	0%											
1 Fuels for follow up by COs											58	14	0%											
6 Delivery of extension and training services to the private sector											34	8	0%											
1 Fuels for supporting market survey											14	4	0%											
2 Fuels for supporting registration (by COs)											19	5	0%											
7 Operation and maintenance											19	5	0%											
2 Construction of infrastructure and procurement of equipment											2,696	674	19%											
1 Construction of office buildings											2,696	674	19%											
2 Construction of research, training and other specialized buildings											375	94	3%											
3 Construction of feeder roads											45	11	0%											
4 Construction of production, market and transportation facilities											60	15	0%											
5 Acquisition of land											240	60	2%											
6 Procurement of vehicles											40	10	0%											
7 Procurement of equipment											180	45	1%											
3 Subsidies, equity and loans											60	15	0%											
1 Provision of cash and/or in-kind subsidies											480	120	3%											
2 Provision of training services to the private sector											480	120	3%											
1 Workshops for participatory selection (venue)											375	94	3%											
2 Inception meetings (venue)											45	11	0%											
3 Inception meetings (transportation)											60	15	0%											
4 Representative training (per diem)											240	60	2%											
5 Representative training (transportation)											40	10	0%											
6 Trust building workshop (per diem)											180	45	1%											
7 Trust building workshop (transportation)											40	10	0%											
8 (AEOs and) NGO training at states (per diem)											60	15	0%											
9 (AEOs and) NGO training at states (transportation)											6	2	0%											

01.12 Farmers organisation support project (cont.)

Project duration	SSP/USD = 4												Total	% to total													
	Phase 1			Phase 2			Phase 3			Phase 4					SSP '000 USD '000												
Cost group	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000	% to total
10 TOT training at states (per diem)		480		480																						960	7%
11 TOT training at states (transportation)		80		80																						160	1%
12 Market survey forum (venue)		150		150																						450	3%
13 Periodical meeting between FBOs and state officers (venue)		20		20																						80	1%
3 Equity investments																											
4 Provision of loans																											
5 Social assistance/donation (Emergency)																											
Total (SSP '000)	2,297	4,009	2,384	1,882	3,467																					14,049	100%
Total (USD '000)	574	1,002	596	473	867																					3,512	
% to total	16%	29%	17%	13%	25%																					100%	

Public sector project
Routine work by government

Private sector project
Routine work by private sector

2.4.13 Promotion of market oriented farming project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Crop		
(2) Project name:	Promotion of market oriented farming project		
(3) Project ID:	0 1 1 3 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2017/18	Ending FY: 2031/32	Duration (years): 15
(5) Total investment:	SSP 4,674,000	USD 1,169,000	Note: Not including recurrent cost

1.2 Project characteristics:

	Code	Abbreviation	Description	Reference
(1) Subsector area:		CR.SA6	Horticultural crop production	Table 2-3
(2) Government organisation:	03	MAF-CO	Directorate of Cooperative Development	Table 2-6
	08	MAF-RD	Directorate of Rural Development	Table 2-6
(3) Activity types:	203	SP-EX	Service delivery/infra.dev.- Extension and training	Table 2-12

1.3 Project characteristics:

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	X
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	X
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	X
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	X
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>Despite South Sudan's substantial agricultural development potential thanks to abundant natural resources and favourable climate and soil conditions, poverty and food insecurity levels remain high. More food is sourced through markets than from own production nearly everywhere in the country, with households relying on markets throughout the year. Except for consistent surplus production in the 'Greenbelt' (especially Western Equatoria), all other states have cereal deficits and three states only reach a self-sufficiency rate of 40%. Consequently, demand for food is predominantly satisfied by imports, mainly originating from neighbouring Uganda and Kenya.</p> <p>Solutions have to be developed for overcoming the multi-faceted causes for low input-low output farming systems and the resulting low levels of subsistence and undersupply at markets. A lack of market incentives, risk-aversion of resource-poor farmers, lack of reliable and trusted market linkages, as well as insufficient and inadequate technical, organisational and business skills and competencies for intensifying and/or expanding areas under cultivation, are just some of the reasons that induce smallholders to remain locked in farming systems focused on low input-low output subsistence agriculture instead of producing for markets.</p> <p>Even worse, while sustainable market access is an important precondition for production growth, signals of undersupply in deficit areas are not communicated to potential food production surplus areas to trigger local production and value addition. Resulting unproductive small-scale farming and inefficient production-to-market linkages make investments into production, trade and processing a risky venture. This is compounded by the continuous risk of insecurity. While it is beyond the scope of individual projects, establishing security is the one most important preconditions for making agriculture work for the poor.</p> <p>Operating in an environment that hinders market-oriented business development and having to go without adequate education, training, advisory, information and financial services, impedes small-scale farmers to increase productivity and sell their produce at local markets. Access to markets is further impeded by inexistent or poor roads.</p> <p>The project will support predominantly subsistence farmers to improve their efficiency in production, storage, and marketing and to establish viable production-to-market linkages for food staples.</p> <p>While the starting point is to support farmers/farmer groups to overcome challenges in production, solutions for improved market access have to be developed in parallel considering that pushing products to markets from the supply side is less successful than production responding to a pull from the market side through demand from buyers.</p>
(2) Objectives:	<p>500 farmer based organizations (FBOs) and micro, small and medium enterprises (MSMEs) increase the availability of marketable (safe and price-wise competitive) produce relevant to food security, with special consideration for gender and youth aspects. They will develop their capacity to understand, manage and reduce business risks and by doing so become more resilient to risks and shocks. The livelihood approach ensures that both food and nutrition security are improved.</p>
(3) Overall description including temporal and spatial extent of project:	<p>The project will be implemented nation-wide. It will not focus on a particular commodity, but be limited to staple crops. The project will cover 3 phases, lasting for 15 years and start in 2017. The project will support private service providers and especially small farmers to adopt managerial, technical and organisational innovations necessary for achieving sustainable change.</p> <p>Public and private service providers will be trained and supported to make quality services (financial and non-financial) available to farmers which will in turn support them in upgrading their operations. This project contributes to the broad objective of commercialising smallholder agriculture in South Sudan.</p>
(4) Component and activity structure:	<p>Component 1: Increase availability and quality of non-financial services to farmers and MSMEs Small farmers and MSMEs have access to quality non-financial services and increase their capacity, including operators at selected warehouse locations who adopt good practices for quality assurance to reduce losses and improve food safety (to ensure prevention of fungal toxins and contamination by human pathogens as well as avoiding or minimizing pesticides residues) along the entire value chain (pre- and post-harvest).</p> <p>Component 2: Increase availability and quality of financial services to farmers Small farmers and MSMEs have access to finance and invest in their operations, using innovative business skills and technologies for upgrading existing/developing</p>

Items	Information
	<p>new business models (e.g. processing, transport, storage).</p> <p>Component 3: Strengthen capacity of FBOs through organisational development to provide services to its members Existing/emerging FBOs are strengthened (organisational development) to provide services to members, helping them to establish profitable and reliable business linkages.</p> <p>Component 4: Provide direct access to training to farmers Small-scale farmers adopt technical and business innovations to increase productivity and production in resource-friendly and sustainable ways for subsistence and surplus sales.</p> <p>Component 5: Enhance access to information Small farmers and MSMEs are knowledgeable of market demand and prices; and, start-up MSMEs (including FBOs) set up profitable businesses along value chains (farming, trading, processing, transport and/ or other operational services)</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Increase availability and quality of non-financial services to farmers and MSMEs</p> <p>Activity 1.1: Carry-out capacity assessments of private service providers by outsourced contractors Outputs 1.1: Assessment report</p> <p>Activity 1.2: Select those with potential to provide services to farmers</p> <p>Activity 1.3: Train service providers to be able to provide extension services, including warehouse management, post-harvest handling practices and Farming as a Business/ Business Development Services (BDS), etc. Outputs 1.3: 10 trained service providers in each state (total 100)</p> <p>Activity 1.4: Train service providers to become Plant Wise “Plant doctors” to enable them to set up clinics in the project area and provide pest management advisory services at production and storage level Outputs 1.4: 5 trained service providers (plant doctors) in each state (total 50)</p> <p>Component 2: Increase availability and quality of financial services to farmers</p> <p>Activity 2.1: Identify banks and/or financial service providers capable and willing to develop financial products for farmers</p> <p>Activity 2.2: Develop improved financing mechanisms by staff at selected financial institutions (e.g. Equity Bank) Outputs 2: improved financial schemes developed by consultants</p> <p>Component 3: Strengthen capacity of FBOs through organisational development to provide services to its members</p> <p>Activity 3.1: Train Cooperative Officers (COs) to conduct training for FBOs</p> <p>Activity 3.2: Assist farmers to build FBOs that establish long-term relationships with buyers and can access pre-finance arrangement</p> <p>Activity 3.3: Assist farmers to build FBOs that are creditworthy and can manage loans and/or qualify for asset financing and other innovative financial products</p> <p>Activity 3.4: Assist farmers to build FBOs that can deliver (demand-oriented) services to their members Outputs 3: 5 trained COs in each state (total 50), and 50 trained FBOs in each state (total 500)</p> <p>Component 4: Provide direct access to training to farmers</p> <p>Activity 4.1: Train Agricultural Extension Officers (AEOs) to conduct training for FBOs</p> <p>Activity 4.2: Deliver direct training to farmers/FBOs: Farmer Field Schools (FFS) on sustainable farming methods (including diversification of crops and improvement of soil conservation practices), utilisation of improved seeds and fertilizers as well as pest management methods</p> <p>Activity 4.3: Organise training on financial management Outputs 4: 10 trained AEOs in each state (total 100), and 50 trained FBOs in each state (total 500)</p> <p>Component 5: Enhance access to information</p> <p>Activity 5.1: State governments place and manage simple price information boards at market sites</p> <p>Activity 5.2: State governments set up and run SMS services with information on prices to which farmers can subscribe Outputs 5: 500 FBOs to be subscribers of SMS services (every two days information services)</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the

<ul style="list-style-type: none"> • Private organisations (e.g. producer organisations such as farmer associations and cooperatives, trader organisations);

Items	Information
framework of the project:	<ul style="list-style-type: none"> • Financial service providers (e.g. Equity Bank); • Companies (e.g. input suppliers or buyers providing embedded services to beneficiaries); and/ or non-governmental organisations (NGO) <p>Note of caution: When employing NGOs, special care needs to be taken not to crowd-out informal actors that make up the majority of the nascent private-sector through well-meant but ill-informed approaches (unintended negative impact of development measures).</p>
(2) Description of beneficiaries within the framework of the project:	<p>Target groups (final beneficiaries) are (potentially) market-oriented small-scale farmers, who usually support households of 6 to 7 members and cultivate an area of 0.8 ha on average. Some farmers are members of (often clan or village-based) FBOs, such as producer groups, associations or cooperatives. Further target groups are existing or start-up private MSMEs operating storage or processing facilities or trade businesses.</p> <p>Women play important roles in agricultural production, wholesale and retail trade and in village-level processing. Women are hence critical for the move away from humanitarian to development aid, towards business-oriented approaches and education for better balanced nutrition for food security. But gender disparity is pronounced with women having greater problems in accessing information, extension and training, land in general and land titles in particular, as well as cash income from sales of commodities and financial services. The project hence has to address the specific challenges of women in turning traditional low input – low output farming into more viable subsistence and more profitable market-oriented surplus production. At the same time, capacity has to be built of downstream female-led micro-enterprises to adopt trading and processing 'as a business' practices.</p>

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	Through being able to market surplus, farmers generate additional income and hence reduce their food insecurity. Additional cash to buy foodstuffs contributes to nutrition security and enhances the value of nutrition through diet diversity. Producing in order to substitute imports contributes to the country's food self-sufficiency; by gaining greater access to resources women are empowered, which in turn leads to higher levels of nutritional status and education of children. Supporting MSMEs along the value chain to establish profitable businesses generates rural non-farm employment opportunities. They can be seen as conflict mitigating, especially when formerly idle youths in conflict-prone areas find employment.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: b</td> <td>Project:</td> </tr> <tr> <td>Positive: c</td> <td>a: is likely to have minimal or little impact on the environment and/or society</td> </tr> <tr> <td></td> <td>b: may have an impact on the environment and/or society</td> </tr> <tr> <td></td> <td>c: is likely to have a significant impact on the environment and/or society</td> </tr> <tr> <td></td> <td>d: will have a significant impact on the environment and/or society</td> </tr> </table>	Negative: b	Project:	Positive: c	a: is likely to have minimal or little impact on the environment and/or society		b: may have an impact on the environment and/or society		c: is likely to have a significant impact on the environment and/or society		d: will have a significant impact on the environment and/or society
Negative: b	Project:										
Positive: c	a: is likely to have minimal or little impact on the environment and/or society										
	b: may have an impact on the environment and/or society										
	c: is likely to have a significant impact on the environment and/or society										
	d: will have a significant impact on the environment and/or society										
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • All measures need to be planned and implemented in a conflict-sensible way ('do no harm' through e.g. participatory planning at community level and equal opportunities for participation of returnees and long-time residents). • Potential risks that need to be addressed upfront include increased use of unfamiliar and sometimes potentially dangerous pesticides. This risk needs specific regulation of input suppliers, regulation and licensing of pesticide imports (an approved list) and for input suppliers to be sensitized to supply personal protective equipment and provide appropriate advice, verbally if necessary for illiterate clients. <p>(Positive)</p> <ul style="list-style-type: none"> • Farmers and MSMEs will be trained in climate-smart production and processing methods to ensure sustainable use of natural resources and prevent any pollution of land, water, air. • Many FBO members will gain knowledge on entrepreneurship and this helps to accelerate income growth and agricultural transformation. 										

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	Very little local produce is sold on markets. Most food is imported from Uganda or Kenya, depending on the location.
(2) Measurable indicators and situation at the end point:	Farmers report producing marketable surpluses and selling it at local markets. Locally produced food can be found at least during and shortly after harvest season at most markets throughout the country.
(3) Methods of measurement and sources of information:	Interviews with farmers and surveys at randomly selected market sites.
(4) Responsible parties for the monitoring and evaluation:	MAFCRD (Directorate of Agricultural Production and Extension Services), Ministry of Commerce, together with State Ministries of Agriculture and Commerce

Items	Information					
2.7 Required human resources						
(1) Principle of human resources management:	<ul style="list-style-type: none"> • The government does not need to increase the number of AEOs and COs but will try to improve their efficiency of service delivery, by providing means of transport (bicycle or motorbike) and technical training as well as practical skills to work with gender issues, and introducing performance based evaluation. Their capacity development support will be conducted through “strengthening of extension service delivery project”. • Some resources are drawn from the nascent private sector, the intention being to build up a number of reliable private service providers that will in the long-run be able to offer their services on the market, becoming profitable businesses themselves. 					
(2) Required human resources in the public sector (Positions, grades and numbers):	Ministries at national and state level provide coordination, oversight and monitoring. Component 5 is managed at the state level: 1 Project Manager at national level, 1 focal point per ministry at state level, i.e. 11 persons					
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	Number and qualification of technical staff to be employed for project implementation will be decided by implementing DP; Private sector actors: agro-input dealers, FBOs, Equity Bank, further private service providers, to be selected under component 1					
2.8 Risk assessment with respect to project objectives and resources to be applied						
(1) Expected level of risk:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; text-align: center;">M</td> <td style="width: 25%; text-align: center;">L: Low</td> <td style="width: 25%; text-align: center;">M: Medium</td> <td style="width: 25%; text-align: center;">H: High</td> <td style="text-align: right;">(select an indicator from the list)</td> </tr> </table>	M	L: Low	M: Medium	H: High	(select an indicator from the list)
M	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	Expected risk level might be medium due to the following reasons. <ul style="list-style-type: none"> • Insecurity of rural areas • Unfavourable conditions of access roads to reach beneficiaries • Conflicts or tensions among beneficiaries, and between beneficiaries and non-beneficiaries • Conflicts between sedentary farmers and pastoralists • Gender disparity (negative cultural and customary practices) • Limited capacity of AEOs/COs and limited means of transport • Natural disasters (e.g. drought, flooding, bird pests, locusts and diseases) • Manmade disasters (e.g. insecurity, raiding, and ethnic conflicts) 					
2.9 Other special considerations and/or notes						
(1) Other special considerations and/or notes:						
2.10 Routine operation and required resources after the completion of the project						
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	Based on necessity: follow-up coaching of private service providers Depending on capacity of farmers to pay for services, a need to subsidise services from private providers for a limited duration after project completion might arise Management of price boards and SMS services					

Part 3: Project cost estimation

Project duration	SSP/USD = 4												Total	% to total																
	Phase 1			Phase 2			Phase 3			Phase 4					SSP '000 USD '000	Total														
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27					27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	
01.13 Promotion of market oriented farming project																														
Project duration																														
1 Management and operation of project																														
1 Deployment of government staff																														
1	677	99	99	113	63	158	162	212	63	63	158	162	212	63	63	162	212	63	63	162	212	63	63	162	212	63	63	2,364	591	51%
2	27	18	27		27	18	27		27	18	27	18	27		27	18	27		27	18	27	18	27	18	27	18	27	81	20	2%
3	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	54	14	1%
4	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	54	14	1%
5	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	243	61	5%
6	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	54	14	1%
7	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	243	61	5%
8				9	9			18					18					18									54	14	1%	
2 Procurement of administrative services (contracted)																														
1	120																											120	30	3%
2	120																											120	30	3%
3 Procurement of professional services (contracted)																														
1	462																											462	116	10%
2	302																											302	76	6%
4 Implementation of staff training																														
5 Implementation of research, studies and surveys																														
6 Delivery of extension and training services to the private sector																														
7 Operation and maintenance																														
1	300																											756	189	16%
2 Construction of infrastructure and procurement of equipment																														
1 Construction of office buildings																														
1	300																											300	75	6%
3 Construction of feeder roads																														
4 Construction of production, market and transportation facilities																														
1	300																											300	75	6%
5 Acquisition of land																														
6 Procurement of vehicles																														
7 Procurement of equipment																														
3 Subsidies, equity and loans																														
1 Provision of cash and/or in-kind subsidies																														
2 Provision of training services to the private sector																														
1	15	335	320																									2,010	503	43%
2	15	335	320																									2,010	503	43%
1	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	60	15	1%
2	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	30	8	1%
3	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	1,680	420	36%
4	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	240	60	5%
3 Equity investments																														
4 Provision of loans																														
5 Social assistance/donation (Emergency)																														
Total (SSP '000)	992	434	419	113	63	173	497	532	63	63	173	497	532	63	63	497	532	63	63	497	532	63	63	497	532	63	63	4,674	1,169	100%
Total (USD '000)	248	109	105	28	16	43	124	133	16	16	43	124	133	16	16	124	133	16	16	124	133	16	16	124	133	16	16	1,169		
% to total	21%	9%	9%	2%	1%	4%	11%	11%	1%	1%	4%	11%	11%	1%	1%	11%	11%	1%	1%	11%	11%	1%	1%	11%	11%	1%	100%			

Public sector project
Private sector project
Routine work by government
Routine work by private sector

2.4.14 Farmers and pastoralists conflict resolution project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Crop		
(2) Project name:	Farmers and pastoralists conflict resolution project		
(3) Project ID:	0 1 . 1 4 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2017/18	Ending FY: 2026/27	Duration (years): 10
(5) Total investment:	SSP 13,307,000	USD 3,327,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		CR.SA10	Production resource management	Table 2-3
(2) Government organisation:	12	MAF-PE	Directorate of Agriculture Production and Extension Services	Table 2-6
(3) Activity types:	101	ID-LI	Institutional development - Legal and institutional development	Table 2-12
	203	SP-EX	Service delivery/infra. Dev.-Extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	X
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	X
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	X
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>Conflict between farmers and pastoralists has become more prevalent and violent since the signing of the 2005 Comprehensive Peace Agreement (CPA) in South Sudan. Tribal conflict in South Sudan, particularly among pastoralist communities, is by no means a new phenomenon. Cattle raiding has been taking place for many generations. This is especially true between the tribes of Dinka, Murle, and Nuer. Cattle raids take place to increase the number of cattle which is a sign of wealth, used for marriage and dowry practices; they are also conducted by male youth as part of their transition from adolescence to manhood. Reprisals have been a part of life for generations between the Nuer, Dinka and Murle tribes. With the continued increase and prolonging of poverty there are many men in the pastoralist communities that lack the number of cattle or means necessary to pay the dowry for a wife. To rectify this they will simply embark on cattle raids in order to gain the number of cattle needed to pay the dowry. However, since the signing of the CPA there are a number of additional factors contributing to this violence instead of just social and cultural norms. There are certain states in South Sudan where conflict between pastoralists and farmers is more prevalent. These states are Jonglei, Northern Bahr el Ghazal, and Upper Nile State. Conflict in these states can also be directly correlated with the fact that these areas also have the majority of people facing severe food insecurity. An estimated 1.7 million people in South Sudan have been food insecure in the last ten years, the majority (up to 40 percent) from Jonglei, Northern Bahr el Ghazal and Upper Nile states (FAO 2010). Food insecurity is mainly related to conflict over natural resources and cattle raiding, the influx of returnees, floods and drought (FAO 2010). The inhabitants of these areas are caught in a poverty trap, trying to survive pursuing livelihoods that are vulnerable to environmental shifts that drive violent conflict.</p> <p>Pastoralists during the rainy season find plenty of grazing land for their livestock in their normal tribal areas (boundaries). However during the dry season these same pastoralists are forced to drive their herds to areas known as “toiche” pastures. These are pastures sustained by the swamp and water areas fed by the White Nile and Sudd (permanent swamp). In the dry season these toiche and swamp areas have permanent water and green grass, perfect for grazing livestock. Unfortunately these are also the same areas where farmers permanently reside because of the abundant water and rich soil that can be used for planting and watering crops. As these pastoralist herders “invade” these areas with their herds, the crops that are planted are trampled and destroyed, grazed, or the cropland is simply taken over from the resident farmers by stronger, better armed pastoralists. Tribal conflict also comes into play because pastoralists from one tribe have gone outside their common boundaries and have encroached on the areas of other tribes. Environmental changes such as prolonged drought are increasing the necessity of migration and reducing the availability of contested resources. In turn this increases the frequency that tribes with long standing feuds and grievances come into contact with each other, resulting in increased conflict.</p>
(2) Objectives:	<ul style="list-style-type: none"> • Government of South Sudan with assistance from the United Nations and other foreign intermediaries will fund, train, and activate a police force to provide security in the conflict areas. • Address the need for water access points within tribal boundaries to help reduce migration of herds during the dry season. • Provide training programs to pastoralists and farmers on improved rangeland management, modern grazing systems, improved forage crop production, and conflict resolution.
(3) Overall description including temporal and spatial extent of project:	<p>Putting an end to long standing tribal enmities will be an enormous task. At times the pastoralist groups doing the cattle raiding are better armed than the police force and even some military units. There have been attempts in the past to disarm certain tribes but this was done unequally with some tribes having their weapons taken away while others kept their's. The tribes with no weapons were then attacked frequently so that they procured more weapons and revenge attacks occurred on all fronts. The first step to ending this conflict is that all tribes involved in these conflicts are disarmed. The second step is a well-funded, well-trained police force that provides strict security in these conflict areas. The government of South Sudan must take immediate steps to implement this disarming and security provision process. Otherwise the violence will continue to spiral out of control. After security has been restored and there is law and order, training for pastoralists and farmers on better rangeland management, grazing systems, increased crop production, and conflict resolution can take place. Another important step will be the construction of livestock water catchment and water access areas within the traditional tribal/pastoralist boundaries. This will enable pastoralists to keep their herds in their traditional grazing lands instead of having to migrate to water sources where conflict will occur. This project profile provides a direct linkage with another CAMP project profile from the livestock subsector. A component for this project profile comes directly from the livestock subsector. Another short term option is fencing. Quality fencing around cropland and crop plots will</p>

Items	Information
(4) Component structure:	<p>help deter cattle and other livestock from coming in and trampling and eating valuable crops. Fencing will work as long as the pastoralist and farmer are on good terms. Fencing will not deter gun violence and raiding parties.</p> <p>Component 1: Increase awareness (disarmament and security provisions) Component 2: Training Component 3: Design and construct livestock watering facilities (linked with livestock subsector) Component 4: Fencing</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Increase awareness (disarmament and security provisions) Activity 1.1: For this project to proceed a government task force must be formed from the highest levels of the military and police forces. Funds must be allocated to increase the number of trained police that can be sent to these conflict areas to provide security and start a mediated disarmament process. If this first step does not occur then this project cannot proceed to the subsequent components. Outputs: A government task team will be organized with assistance from the United Nations; funding from both the government and donor agencies will be supplied to recruit, train, and activate a strong police force in the conflict areas. It is important to note that the police force must consist of a thorough mix of tribal backgrounds so that favouritism does not occur. Costing for this component should not take place for the CAMP project as it is the responsibility of the military and police levels of government instead of the Ministry of Agriculture.</p> <p>Component 2: Training Activity 2.1: Once security is restored in the conflict areas a team consisting of international and national specialists will conduct a series of training workshops to both pastoralists and farmers. For pastoralists they will receive training in improved range management, modern grazing systems, forage crop production to supplement natural grasses during the dry season, construction and maintenance of water catchment areas, animal health, and conflict resolution. For farmers they will receive training on improved crop production techniques, forage crop production (to sell forage crops to pastoralists during the dry season), utilizing areas for crop production outside of valuable water areas, and conflict resolution. Outputs: At least 4 training trips will be made to each of the 3 states affected most by the conflict (Jonglei, Northern Bahr el Ghazal, and Upper Nile states) by the specialist training team (12 trips total). The specialist training team will consist of the following people:</p> <ul style="list-style-type: none"> • 1- international consultant specializing in rangeland management and livestock production. • 1- international consultant specializing in hydrology and water catchment construction (could be same consultant that is utilized in livestock project profile). • 1- international consultant specializing in crop husbandry/extension. • 1- international consultant specializing in social (including gender) surveys and conflict resolution • 2- MAFCRD agricultural extension officers • 6- MAFCRD state agricultural extension officers (2 for each of the 3 states) • The training schedule would consist of the team going to the field and conducting 1 week of training (8 hours per day, 5 days per week). This same training schedule would take place 3 additional times as “follow up” training. This output would take approximately 1 year to complete including the development of training curriculum. The state extension officers would only be utilized when the main training team visits the state where those particular state officers are assigned. <p>Component 3: Design and construct livestock watering facilities This component will be part of the CAMP livestock project “Development of livestock water catchment and watering areas”. A summary of this project follows.</p> <p>The project team will visit existing water catchment areas (locally called haffirs) throughout South Sudan to determine successes and failures. It will conduct extensive field visits to interview tribal leaders, county CAHWs, state government officers, and other community leaders to determine politically viable areas for constructing water catchments. It will locate livestock watering facilities according to the following criteria: livestock migratory routes, areas with high livestock populations, areas with suitable soil types for haffirs, areas that have a history of conflict with watering livestock etc.</p> <p>The project will design and implement haffirs with appropriate specifications</p>

Items	Information
	<p>(catchment, borehole wells; solar, or wind mill powered). It is proposed to start with at least 9 haffirs. It is estimated that construction could take at least 1 year and possibly longer.</p> <p>The project will also assist in the formation water association groups around the locale of the new haffirs. These groups will receive training on the proper use, maintenance, conflict resolution, and importance of clean water for livestock.</p> <p>Component 4: Fencing</p> <p>Activity 4.1: Fencing acts as a deterrent for cattle and other livestock wanting to enter cropland. There are many different types of fencing. Permanent fencing includes posts with either 3 strands or 4 strands of wire. Other permanent fencing that is expensive is rock wall fencing, pipe fencing, and fencing created by bushes and trees planted in close proximity. Temporary fencing includes electric fencing. There are many types of electric fence chargers that do not require electricity. The charger can be attached to a car battery or is charged through solar power. One or 2 strands of high tensile wire is then stretched and attached to either metal poles with “insulators” to hold the wire on the posts or fiberglass posts. One electric fence charger can provide a charge for many kilometres of fencing.</p> <p>Outputs: A technical assistance team consisting of international and national consultants will choose 10 pilot farms (1 in each state) to conduct demonstration fencing. This team will purchase and construct the fencing on these farms and then use the fencing demonstrations as training for other farmers. Two types of fencing will be constructed on each farm. The first type will be permanent fencing consisting of wood or metal posts pounded into the ground and then 4 strands of barbed wire stretched between the posts to serve as the actual fencing. The second type of fencing will be temporary electric fencing. Metal “t-posts” or fiberglass posts will be purchased and then high tensile wire will be attached to the posts. An electric fence charger with either a car battery or solar power will be used to “electrify” the fence.</p> <p>The fencing team will consist of the following:</p> <ul style="list-style-type: none"> • 1- international consultant specializing in rangeland management and livestock production. • 2- MAFCRD agricultural extension officers • 20- MAFCRD or MLFI state agricultural extension officers (2 for each of the 10 states) • The team would work with each farmer to construct the fencing. The length of fence will depend on the size of the farm. It is estimated that it will take at least 2 weeks at each farm to construct both types of fencing. At least 5 additional workers/labourers would need to be hired for each farm to help with construction. Once the fencing is complete the fencing team would return to conduct training for additional farmers. Each training session would only need to last 1 day at each farm for a total of 10 days. • Approximate cost of fencing: <ul style="list-style-type: none"> • Electric fence chargers cost \$150 US dollars each x 10 chargers. In addition high tensile wire electric fencing is approximately \$3.50 USD/meter • Permanent barbed wire (4 strand) fencing is approximately \$5.00 USD/meter

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	Service providers would be a well-trained police force, international consultants with experience in rangeland management, livestock production, and hydrology. From the public sector national MAFCRD agricultural extension officers with extensive experience of pastoralist and water issues would be needed.
(2) Description of beneficiaries within the framework of the project:	Primary beneficiaries are pastoralists and farmers that feel secure in pursuing their livelihoods. Secondary beneficiaries are women and children in conflict areas who will be protected and safe once the violence ceases. Their quality of life will greatly improve.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	The end to violence, thousands of deaths, and destruction of communities as a result of conflict between pastoralists and farmers. With pastoralists and farmers being secure they will increase their production, increase their income, and contribute to the overall food security of South Sudan.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td> Negative: d Positive: d </td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: d Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: d Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		

Items	Information
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> This project will be very dangerous and any consultant or staff working in these areas will be at great risk until security is restored. <p>(Positive)</p> <ul style="list-style-type: none"> Ending the conflicts between pastoralists and farmers will greatly improve the quality of life of families in the areas that have been affected. Thousands of lives will be spared and agricultural production in these areas will increase.

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	Recorded number of conflicts, deaths, and cattle stolen
(2) Measurable indicators and situation at the end point:	Recorded number of conflicts, deaths, and cattle stolen (hopefully much reduced), fenced areas, number of trained police officers, number of water points constructed
(3) Methods of measurement and sources of information:	Government of South Sudan statistics, United Nations statistics, NGO statistics
(4) Responsible parties for the monitoring and evaluation:	Government of South Sudan - national and state police forces, United Nations, selected NGOs.

2.7 Required human resources

(1) Principle of human resources management:	International consultants with at least a Master's degree would be needed for providing technical assistance in the form of rangeland management, livestock production, and hydrology. Senior level MAFCRD extension officers at the national level and entry level to mid-level state extension officers would be needed at the state and local levels.
(2) Required human resources in the public sector (Positions, grades and numbers):	Public sector human resources would consist of the following: <ul style="list-style-type: none"> 2- MAFCRD agricultural extension officers 20- state agricultural extension officers
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	Consultants in the field of: <ol style="list-style-type: none"> 1. One project management and rangeland management expert (Master degree, 15-years experience) 2. One crop husbandry/extension expert (MSc or MA, 5-years experience) 3. One livestock production expert (MSc, 5-years experience) 4. One hydrologist/irrigational engineer (MSc, 5-years experience) 5. One social (including gender) survey and conflict resolution expert (BSc or BA, 5-years experience)

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	H L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	The risk associated with this project is high due to the risk of ongoing violence and insecurity. Consultants and staff would be at great risk if security is not restored. <ul style="list-style-type: none"> Incomplete disarmament Attacks by pastoralists due to grudges Conflicts or tensions among pastoralists, and between pastoralists and settled farmers Unfavourable conditions of access roads to reach beneficiaries Gender disparity (negative cultural and customary practices) Delay of material delivery due to inappropriate timing of budget disbursement and unfavourable road conditions Natural disasters (e.g. drought, and flooding) Manmade disasters (e.g. insecurity, raiding, and ethnic conflicts)

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	None of the agricultural components of this project can take place until security is restored in the conflict areas by the government of South Sudan.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>Human resources (on-going):</p> <ul style="list-style-type: none"> 2- MAFCRD agricultural extension officers (senior level) 20- state extension specialists (entry or mid-level specialists) <p>Other on-going expenses:</p> <ul style="list-style-type: none"> Laptops for each worker Transportation allowance for workers to provide routine technical assistance to farmers in their assigned states and counties. Communication allowances (cell phone and internet) Routine office supplies and maintenance
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Part 3: Project cost estimation

Project duration	Phase 1				Phase 2				Phase 3				Phase 4				Total													
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000	% to total			
1 Management and operation of project	4,023	3,781	1,941	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	10,025	2,506	75%		
1 Deployment of government staff	61	3																									64	16	0%	
1 Trainings at the most 3 affected states (per diem)	50																										50	13	0%	
2 Trainings at the most 3 affected states (transportation)	8																										8	2	0%	
3 Fencing & training trip to 10 states (per diem)	1																										2	0	0%	
4 Fencing & training trip to 10 states (transportation)	2																										4	1	0%	
2 Procurement of administrative services (contracted)	31	11	11																								41	10	0%	
1 Casual labour for fencing	11	11																									21	5	0%	
2 Transportation of material for fence	20																										20	5	0%	
3 Procurement of professional services (contracted)	3,877	3,726	1,901																								9,504	2,376	71%	
1 International consultant (project management, range management)	1,080	1,080	540																								2,700	675	20%	
2 International consultant (crop/husbandry/extension)	907	907	454																								2,268	567	17%	
3 International consultant (livestock)	907	907	454																								2,268	567	17%	
4 International consultant (social survey/conflict resolution)	605	454	454																								1,512	378	11%	
5 International consultant (hydrology/irrigation)	378	378																									756	189	6%	
4 Implementation of staff training																														
5 Implementation of research, studies and surveys	14	1																										15	4	0%
6 Delivery of extension and training services to the private sector	13																											13	3	0%
1 Fuels for trainings at the 3 most affected states	1																											2	1	0%
2 Fuels for fencing & training	40	40	40																									400	100	3%
7 Operation and maintenance	40	40	40																									400	100	3%
1 Fuels, consumables for monitoring & supervision at states	40	40	40																									400	100	3%
2 Construction of infrastructure and procurement of equipment	1,094		1,094																									3,282	821	25%
1 Construction of office buildings																														
2 Construction of research, training and other specialized buildings																														
3 Construction of feeder roads	1,094		1,094																									3,282	821	25%
4 Construction of production, market and transportation facilities	640		640																									1,920	480	14%
1 Demonstration fencing (permanent type) at 10 sites	454		454																									1,362	341	10%
2 Demonstration fencing (temporary electric type) at 10 sites																														
5 Acquisition of land																														
6 Procurement of vehicles																														
7 Procurement of equipment																														
3 Subsidies, equity and loans																														
1 Provision of cash and/or in-kind subsidies																														
2 Provision of training services to the private sector																														
3 Equity investments																														
4 Provision of loans																														
5 Social assistance/donation (Emergency)																														
Total (SSP '000)	5,117	3,781	1,941	1,134	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	13,307	100%		
Total (USD '000)	1,279	945	485	284	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	3,327			
% to total	38%	28%	15%	9%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%			

Public sector project
Routine work by government
Private sector project
Routine work by private sector

2.4.15 Strengthening of extension service delivery project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Crop		
(2) Project name:	Strengthening of extension service delivery project		
(3) Project ID:	01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2016/17	Ending FY: 2025/26	Duration (years): 10
(5) Total investment:	SSP 30,612,000	USD 7,653,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		CR.SA2	Public sector institution and management capacity development	Table 2-3
(2) Government organisation:	12	MAF-PE	Directorate of Agriculture Production and Extension Services	Table 2-6
(3) Activity types:	203	SP-EX	Service delivery/infra.dev.- Extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	X
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	X
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>Farmers need correct knowledge about many aspects of farming to improve their effectiveness and to improve yields. Agricultural extension officers play a key role in raising productivity by offering technical advice, helping farmers to identify problems and opportunities, and sharing information and skills with farmers.</p> <p>However, extension activities are minimally provided across the country by the government. Only in some areas, are there agricultural extension officers (AEOs) at county offices. Most areas do not have any extension officers. There are not sufficient AEOs hired or deployed at county and/or payam levels which is where they should be working.</p> <p>Many AEOs do not have transport and have minimal budget for their activities. Therefore, these AEOs cannot visit communities periodically. They accompany NGO extension workers when they have activities in a community.</p> <p>It is important that extension officers help farmers to improve their knowledge and skills by providing correct and up to date information so that farmers can improve their livelihoods. However, many extension officers cannot deliver appropriate services to farmers. This is because: the knowledge level of AEOs is sometimes inadequate and outdated; and, they have limited education and/or training opportunities about extension work. NGO extension workers are better qualified and many have a bachelor's degree in agriculture and/or extension services. To improve the quality of agricultural extension services, the capacity of extension officers must be improved,</p> <p>The project will support effective transport, necessary equipment for extension services, and appropriate training to improve the knowledge and skills of AEOs about agriculture and extension work.</p> <p>Furthermore, there have been volunteer extension workers called community based extension workers (CBEW). They are nominated farmers who disseminate information about farming skills. In theory the AEOs support CBEWs to provide extension services at the boma level. It is effective to assign core farmers to be CBEWs to implement extension activities, rather than the AEOs visit all the communities. However, there are few active CBEWs. Reasons for this are: limited technical support by AEOs, no opportunities to update their knowledge, no means of transport and limited funds for activities. Since the number of AEOs is limited to provide service at the boma level, it is effective to have CBEWs who are familiar with the communities to reach directly to farmers. Hence, the project will also increase numbers and strengthen the capacity of CBEWs.</p>
(2) Objectives:	<p>The aims of the project to enhance the capacity of both AEOs and selected farmers as community based extension workers (CBEWs).</p>
(3) Overall description including temporal and spatial extent of project:	<p>This project will focus on strengthening extension service delivery through enhancing the capacity of government extension officers. The operation of the extension system will also be strengthened. The project will cover all ten states of South Sudan.</p> <p>The "Extension system reform and efficient service delivery" project focuses on reform of the agricultural extension system. It will review the current extension system with the aim of developing a more efficient system. Current government extension officers, such as AEOs, will be identified and reassigned to appropriate locations. This project focuses on providing training to these AEOs. Collaboration between AEOs and NGOs extension workers will be established, but training will not be provided to NGO extension workers.</p> <p>Firstly, activities would focus on strengthening existing AEOs. Provision of training to AEOs would continue throughout this project. The project "Extension system reform and efficient service delivery" should have identified available AEOs and deployed them. However, if this has not happened (project not approved/funded etc.), this project will perform these activities, including collecting relevant information (current AEOs locations and positions, ability and skill levels, educational background, tribe, age, past experience, etc.). This project will train these AEOs, so coordination between the 2 projects will be critical for project implementation. Training for AEOs will first be held at CTC Yei; as new training centres are constructed and operational under the "Establishment of training institution infrastructure" project, AEOs will be trained at their closest centre.</p> <p>After training the existing AEOs, CBEWs will be selected and trained. The selection process will inform potential CBEWs of terms of references, benefits etc. Training for CBEWs will be held where most cost effective. It is possible that new training centres will be available and training could be conducted there.</p>

Items	Information
(4) Component structure:	<p>Lastly, the project will assist the newly trained AEOs and CBEWs to provide extension services. Appropriate transport, necessary equipment, and materials for extension work will be provided to AEOs and CBEWs. The AEOs will start providing extension services first; as CBEWs are trained they will also become operational. AEOs will visit boma offices to supervise and provide technical support to CBEWs as part of their routine work.</p> <p>As a part of the extension approach, CBEWs will develop experimental plots at boma offices with support from AEOs. CBEWs will use them to demonstrate agricultural skills and experimental crops. Communities will be able to see the benefits and their leaders will be asked to share it with people in their communities. The AEOs will also visit with community leaders to support CBEWs. CBEWs will have the opportunity to experiment with agricultural inputs, improved varieties of seed, fertilizers, etc. at the project's expense. Farmer to farmer visits could be arranged by community leaders. Information and topics will be based on the interests and needs of the communities. Field trips could be arranged to learn from actual farms. The project would cover costs for these activities. Underperforming CBEWs will be replaced.</p> <p>Component 1: Capacity development of AEOs Capacity development and strengthening how extension services are delivered are the major activities.</p> <p>Component 2: Capacity development of CBEWs Capacity development of CBEWs and their incorporation into the extension service delivery system are the major activities.</p> <p>Component 3: Implementation of extension activities with technical support Extension work will be improved with the enhanced capacity of AEOs and CBEWs by following the strengthened extension service delivery system</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Capacity development of AEOs</p> <p>Activity 1-1: Conduct needs assessment and situation analysis about AEOs in terms of knowledge, skills, equipment, numbers, locations, and facility Outputs: Needs assessment and situation analysis reports include availability of AEOs in all locations (The "Extension system reform and efficient service delivery" project may provide this information)</p> <p>Activity 1.2: Clarify and/or confirm roles, responsibilities, duties, and set up standards about knowledge and skill levels for AEOs at state, county, and payam levels; develop supervising and reporting systems for extension activities Outputs: Documents on TORs for AEOs and expected duties, and on how services will be delivered (1 person with extension and/or training experience from 5 different NGOs will also be invited.)</p> <p>Activity 1-3: Develop detailed training plan, training materials, manuals, other materials, Outputs: Detailed training curriculums with schedules, training materials, manuals, and other materials such as leaflets and crop calendars (5 teaching staff from CTC Yei and 3 teaching staff from YATC will be invited. 1 person with extension and/or training experience from 5 different NGOs will also be invited from Juba and Yei.)</p> <p>Activity 1-4: Provide training for AEOs Outputs: Trained AEOs (Actual existing and available numbers of AEOs are uncertain, but 291 AEOs are supposed to be available nationwide. Theoretically training should be carried out for 291 AEOs, but it could be more or less. Training will be conducted at CTC Yei, but if other training centres were available they would be used.)</p> <p>Activity 1-5: Procure and provide transport and necessary equipment Outputs: Trained AEOs with means of transport (motorcycles) and necessary equipment (Theoretically speaking, 291 motorcycles, 291 farm tools and other extension materials are procured and provided, but it could be more or less.)</p> <p>Activity 1-6: Provide in-service training for AEOs every 3 years Outputs: AEOs with updated knowledge and skills about farming and agricultural extension (In-service training will be provided by the closest training centres.)</p> <p>Activity 1-7: Provide induction training to newly assigned AEOs according to the standard knowledge and training curriculum for AEOs Outputs: Trained newly assigned AEOs (Every year, some AEOs might retire. New AEOs must be recruited to fill vacant positions. Induction training will be held every year. The training centre to provide it will be rotated every year.)</p>

Items	Information
	<p>Component 2: Capacity development of CBEWs</p> <p>Activity 2.1: Conduct needs assessment and situation analysis about CBEWs in terms of knowledge, skills, equipment, methods of selection, current numbers and activities of CBEWs deployed in bomas, available facilities in each boma Outputs: Needs assessment and situation analysis report about CBEWs</p> <p>Activity 2.2: Re-define roles, responsibilities, duties, and required knowledge for CBEWs Outputs: Documents on roles, responsibilities, duties, and required knowledge and skills for CBEWs, list of current CBEWs (if any exist); challenges and possible solutions</p> <p>Activity 2.3: Develop a training plan with schedules, training materials, manuals, other materials to deliver effective extension activities Outputs: Training curriculums with schedules, training materials, manuals (5 teaching staff from CTC Yei and 3 teaching staff from YATC will be invited . 1 person with extension and/or training experience from 5 different NGOs will also be invited from Juba and Yei.)</p> <p>Activity 2.4: Select farmers based on discussions with communities at each boma and appoint them as CBEWs Outputs: Selected CBEWs with signed document signalling understanding of TORs (duties etc.) (Up to 2 CBEWs could be selected per boma depending on decisions by the surrounding communities. The current estimate of number of bomas is 2,097, so maximum total numbers of CBEWs could be 4,194.</p> <p>Activity 2.5: Conduct training for CBEWs and provide means of transport and equipment Outputs: Trained CBEWs with means of transport and equipment including farm tools (Maximum 4,194 CBEWs will be trained at state capitals. One training session can accept 50 CBEWs maximum. If there are 2 CBEWs in a boma, the division of duties will be clearly defined in meetings with community leaders. Training will be conducted by staff of CTC Yei and new training centres (established under another project), either at the training centre or rented space at the state capital, depending on cost effectiveness.</p> <p>Component 3: Implementation of extension activities with technical support</p> <p>Activity 3.1: Trained AEOs and CBEWs start engaging in extension work Outputs: Improved extension service delivery with wider coverage, including demonstration plots, farmer field schools, farmer to farmer visits, state-wide annual agricultural show</p> <p>Activity 3.2: Establish experimental plots in compound of boma offices or an appropriate location Outputs: Experimental plots to be utilised in each boma for demonstration purposes (At least 20 community leaders in each boma are expected to attend information sharing sessions every 3 weeks.</p> <p>Activity 3.3: Organise farmer to farmer visits and field visits with lectures Outputs: Farmers with increased knowledge about improved and/or new farming skills or information</p> <p>Activity 3.4: Establish radio extension program in each state Outputs: Radio extension programs (Weekly 30 minutes agricultural extension radio shows planned and organised by the state Ministry of Agriculture. Each state will develop their own radio programmes through the local radio station.)</p> <p>Activity 3.5: Hold periodical meetings of AEOs and CBEWs Outputs: Agenda and minutes of meetings, written reports from all the AEOs, oral reports from all CBEWs, shared challenges and suggested solutions (Hold a 2 day meeting at state level twice a year inviting only AEOs and some successful CBEWs to the state capital for annual reviews. Hold a 1.5 day meeting at county level 4 times a year inviting all the AEOs and CBEWs in that county to submit reports.)</p> <p>Activity 3.6: Monitor and evaluate extension service delivery and its impact to provide feedback Outputs: Monitoring and evaluation report, improved work by AEOs, CBEWs, and state government staff with suggestions for improvement (M & E will be conducted 1 time a year for 9 years by this project.)</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:

- Directorate of Agriculture Production and Extension Services of MAFCRD will be responsible for providing technical and financial support for the project.
- Ministry of Agriculture in the state, county, and payam governments are responsible for planning for capacity development of AEOs and CBEWs and organising training activities.
- AEOs and CBEWs are service providers of extension work for farmers.

Items	Information		
(2) Description of beneficiaries within the framework of the project:	<ul style="list-style-type: none"> • Crop Training Centre Yei (CTC Yei) will play a key role in providing training for AEOs and CBEWs. • Yei Agricultural Training Centre (YATC) will provide support in the planning stage at meetings and workshops. • NGO extension workers will be invited for meetings and workshops in the planning stage. They might also be requested to be instructors if necessary for some training sessions. Moreover, NGO extension workers will work closely with AEOs and CBEWs to enhance the quality and impact of extension services. <p>Primary beneficiaries of the project are AEOs and CBEWs. Indirect beneficiaries are staff of Directorate of Agriculture Production and Extension Services of MAFCRD, and staff of the Ministry of Agriculture in state, county, payam government offices. Farmers also receive improved extension services by AEOs and CBEWs.</p>		
2.4 Outcomes, impact and contributions to value added (i.e. economic growth)			
(1) Outcomes and impact:	<p>The AEOs will have improved skills and knowledge. They will be able to deliver better quality extension services to farmers. CBEWs will improve their skills for extension service delivery to farmers in their areas. Service delivery of extension will be more systematic in a wider area.</p>		
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)		
2.5 Environmental and social impact, and mitigation measures			
(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1" style="width: 100%;"> <tr> <td style="width: 20%; vertical-align: top;"> Negative: a Positive: c </td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: a Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: a Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • Negative environmental impacts are considered to be minimal because the project focuses mainly on training on extension service delivery. Even if motorcycles were provided to all the AEOs, environmental impact from the use of them is limited. If offices at county and/or payam levels were constructed to deploy AEOs, these offices would be small (constructed under a different project). Provided means of transport for CBEWs are bicycles. Therefore, negative environmental impacts will be minimal. <p>(Positive)</p> <ul style="list-style-type: none"> • Enhancing the capacity of AEOs and CBEWs, including better transport, would have a significant impact on improving farming practices which would lead to increased yields and profits for farmers. 		
2.6 Monitoring and evaluation for impact measurement			
(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • Total number of AEOs in the government list (291) • Number of AEOs engage in field activities for extension service delivery • Knowledge and skill levels of AEOs • Number of active CBEWs • Knowledge and skill levels of CBEWs 		
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • 291 trained AEOs • 291 AEOs engage in field activities for extension service delivery • Improved knowledge and skill levels of AEOs plus capability to supervise and support CBEWs as well as work with farmers • 4,194 trained and active CBEWs • Outreach to 85,000 farmers • Number of farmers who adopted new knowledge and skills • Number of farmers who improved efficiency, increased their yields, profits, and/or solved issues such as pests and diseases • Number of regular reports submitted to each level of government 		
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> • Needs assessment and situation analysis reports • Government list of AEOs and CBEWs • Training records • Project reports • Monitoring and evaluation reports • Regular reports submitted by AEOs, observation of field conditions • Observation of farming practices • Interviews of AEOs, CBEWs, and farmers 		
(4) Responsible parties for the monitoring and evaluation:	MAFCRD, Directorate of Agricultural Production & Extension Services, AEOs, Department of Extension of the state Ministry of Agriculture		
2.7 Required human resources			
(1) Principle of human resources management:	<ul style="list-style-type: none"> • Total numbers of AEOs do not need to be increased. • State government offices play an important role to manage delivery of extension services. Thus, key staff of the state Ministry of Agriculture should attend all the training 		

Items	Information
	<p>for this project.</p> <ul style="list-style-type: none"> • Trainers at CTC Yei need to support the project so as to plan and provide training as well as support other trainers at the new training centres. • Needs assessment and situation analysis will be outsourced to local NGO and/or local consultants for effective project implementation. • CBEWs will work on a voluntary basis, but necessary costs for transport and accommodation should be provided when meetings are held away from the boma or when extension activities are organised, such as field visits. When CBEWs are selected, duties and responsibilities of CBEWs should be clarified and understood by community leaders and CBEWs, with written agreement. If a CBEW fails to fulfil his/her responsibilities, he/she would be replaced by another person. • Up to 2 CBEWs could be selected per boma to reflect the complex situations in communities (gender, youth, tribe etc.)
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> • Project manager from MAFCRD (one senior staff from the MAFCRD, Directorate of Agricultural Production and Extension Services, grade 3 or 4) • Project staff from MAFCRD (three staff, two from the Directorate of Agricultural Production and Extension Services, one staff from Agricultural Education and Training) for project detailed design, conduct of needs assessment, project implementation and management, procurement, logistics, and monitoring, etc. • Director of extension and senior inspector of extension, grade 7 and inspector of extension, grade 8 from the state governments. These project staff from the state Ministry of Agriculture work with MAFCRD to implement the project.
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Consultants in the field of :</p> <ul style="list-style-type: none"> • Project management (Master's degree, 15-years experience): One • Agricultural extension specialist (BA or BSc, 10-years experience or more): One • Agronomy expert (BSc or BA, 8-years experience or more): One • Education and training expert (BA, 5-years experience or more): One • Project coordinator (BA in Agriculture desirable, 3-years experience or more): One • Training for AEOs and CBEWs will be provided by CTC Yei and other government training centres (BA or more in Agricultural discipline, 10-year experience or more for extension and/or training on extension). CTC Yei and other government training centres could use either their permanent teaching staff or hire temporary teaching staff from other organizations. • Needs assessment and situation analysis in 10 states will also be outsourced to local NGOs and/or local consultants

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	<table border="1"> <tr> <td style="text-align: center;">M</td> <td style="text-align: center;">L: Low</td> <td style="text-align: center;">M: Medium</td> <td style="text-align: center;">H: High</td> <td style="text-align: center;">(select an indicator from the list)</td> </tr> </table>	M	L: Low	M: Medium	H: High	(select an indicator from the list)
M	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	<p>The following risks should be considered.</p> <ul style="list-style-type: none"> • Difficult to secure sufficient numbers of AEOs to train and supervise CBEWs • Difficult to find sufficient numbers of CBEWs • Selection of CBEWs needs to be carefully conducted considering the complex situation in the bomas (gender, youth, tribe etc.) • Possibly difficult to find funding sources to implement the “Extension system reform and efficient service delivery” project • Insecurity and conflicts at some target sites 					

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	<ul style="list-style-type: none"> • This project is closely related to the “Extension system reform and efficient service delivery” project. The project deals with extension system reform including re-organisation of existing AEOs. Thus, total numbers of AEOs could be reduced depending on the results of the project which would affect numbers needing training, procurement of transport and equipment, as well as timing. Therefore, close communication with this project’s staff needs to be made on a regular basis. • CBEWs would be replaced if he/she does not provide extension services according to their TORs. Communities have the right to select and replace CBEWs based on their performance. • Many other training courses are planned in the different projects under the crop subsector. This training will also be provided to AEOs. Coordinating training schedules for AEOs will be important.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>Field work supervision by AEOs, regular reports, meetings among AEOs and CBEWs, monitoring and evaluation, all routinely conducted.</p>
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2.4.16 Strengthening and establishment of training institution infrastructure project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Crop		
(2) Project name:	Strengthening and establishment of training institution infrastructure project		
(3) Project ID:	01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2017/18	Ending FY: 2026/27	Duration (years): 10
(5) Total investment:	SSP 77,368,000	USD 19,342,000	Note: Not including recurrent cost

1.2 Project characteristics:

	Code	Abbreviation	Description	Reference
(1) Subsector area:		CR.SA2	Public sector institution and management capacity development	Table 2-3
(2) Government organisation:	10	MAF-ET	Directorate of Agricultural Education and Training	Table 2-6
(3) Activity types:	210	SP-SI	Service delivery/infra.dev.-Social infrastructure development	Table 2-12

1.3 Project characteristics:

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	X
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	
	81	WA	Warrap State	
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFPP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>Although there are several government training centres in South Sudan, there are many challenges that training centres and potential trainees are facing. The first challenge is the limited number of training centres offering courses about crop production and extension skills as well as the unstable financial condition of the Crop Training Centre Yei (CTC Yei). The second challenge is due to the limited number of training centres which are unevenly located geographically.</p> <p>There are 5 major government training centres in South Sudan. These training centres specialize in subsector areas such as crop production, forestry, livestock, and fisheries to offer subsector specific courses and classes. CTC Yei is the only government training centre that offers training courses related to agricultural extension and crop production. The centre offers a 3 months agribusiness extension course which is provided only once a year. Some other tailored courses are organised based on demands. Some courses are carried out by NGOs and CTC Yei provides only its facility to them. CTC Yei consists of several one floor buildings that have been used as classrooms. A dining room and dormitory halls are available for more than one hundred people. As far as space and facilities are concerned, CTC Yei has enough capacity to provide more training courses. However, it has been difficult for CTC Yei to retain sufficient qualified teaching staff due to its unstable financial situation. This problem should be addressed to enable CTC Yei to provide more training courses with higher quality.</p> <p>CTC Yei is located in Yei County, in the south of Central Equatoria State (CES). It is 6 to 7 hours away from Juba by road. There is another agricultural training centre called Yei Agricultural Training Centre (YATC). This centre is operated by an NGO and funded by a Norwegian government agency. The centre offers a broad range of agricultural training courses, and is located in Yei County, the same location as CTC Yei.</p> <p>This situation limits training opportunities for potential trainees from different parts of the country due to the distance to the existing training centres. Information about the training centres, available courses, costs, and the reputation about the centres is less available to them. State government officials are also less familiar with these two training centres because of the distances. Those officials not based close to Yei have fewer opportunities for training than those close to Yei.</p> <p>Therefore, considering the need for skills and knowledge about crop production and extension, the available training centres are too few. The availability of government training centres that could offer training courses about crop production and extension skills needs to be increased across the country.</p>
(2) Objectives:	<p>Objective of the project is to increase the number of training centres which provide courses about crop production and extension skills and to improve access for potential trainees not living close to Yei. Newly established training centres would have appropriate staff and sufficient equipment to provide a sufficient number of required training courses. At the same time, the existing training centre, CTC Yei should be strengthened so as to improve its capacity to provide training in crop production and extension.</p>
(3) Overall description including temporal and spatial extent of project:	<p>In the early part of the project, a detailed assessment of agricultural training needs would be conducted in each major town. Potential sites and buildings, the capacity of state governments to support the establishment and operation of training centres, and accessibility for trainees from surrounding areas would also be examined. The current situation of CTC Yei would be studied: number and contents of courses, number of trainees, facilities, equipment, trainers, annual budget and funding sources.</p> <p>These results will be discussed with the staff of the Directorate of Agricultural Education and Training, MAFCRD.</p> <p>Detailed plans to strengthen CTC Yei will be developed and implemented. Financial sources must be secured to operate the centre and recruit more teaching staff to meet expected demands for training.</p> <p>In the second part of this project, detailed construction/implementation plans are developed for the new training centres. It is expected that 7 new centres will be established.</p> <p>As construction proceeds, necessary equipment and furniture will be procured. New directors and required numbers of staff for newly established training centre will be recruited with clear terms of reference (TORs). The vision, mission, rules and annual operating plan will be developed. The newly recruited teaching staff will be trained. In consultation with state ministries, new training courses will be identified. The state</p>

Items	Information
(4) Component structure:	<p>ministries will select trainees for the new training centres.</p> <p>Component 1: Assessment of CTC Yei and needs for training courses in other states; plan to establish new training centres; upgrade CTC Yei</p> <p>Component 2: Construct and equip new training centres</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1: Assessment of CTC Yei and needs for training courses in other states; plan to establish new training centres; upgrade CTC Yei</p> <p>Activity 1.1: Identify needs of strengthening CTC Yei and establishing agricultural training centres in other locations through interviews and site visits Outputs: Needs assessment and situation analysis report about agricultural training (Facilities for new training centres are expected to be constructed at the same compound and/or on the same land where new agricultural research centres will be constructed under the “Development of research institution infrastructure” project. Sites will mainly be selected by this project, but it would be best to jointly assess potential construction sites.</p> <p>Activity 1.2: Define roles and strategies; develop detailed plans for strengthening CTC Yei and the new training centres, taking account of training needs identified in other CAMP projects Outputs: Detailed plans including: operation plan, funding mechanisms, teaching quality, improvement and/or availability of curriculums and class contents, construction plan for new training centres (includes EIA), refurbishment plan for CTC Yei (includes EIA), necessary equipment and teaching materials for all planned courses (existing and new).</p> <p>Activity 1.3: Clarify required amount of funds and secure its source to hire new staff for CTC Yei, and maintain it and its activities Output: Clarified government budget allocation and execution process, secured source of funds and necessary amounts</p> <p>Activity 1.4: Refurbish CTC Yei Output: CTC Yei with improved facilities</p> <p>Activity 1.5: Improve teaching quality Output: CTC Yei staff are better able to teach trainees</p> <p>Activity 1.6: Procure necessary teaching materials Output: CTC Yei have suitable teaching materials</p> <p>Activity 1.7: Recruit and train new teaching staff for CTC Yei Output: Additional teaching staff at CTC Yei able to teach more trainees and courses</p> <p>Activity 1.8: Prepare and practice to teach new training courses Output: New training courses available for trainees</p> <p>Activity 1.9: Monitor and evaluate operation, management of the centre and quality of classes of CTC Yei Output: Monitoring and evaluation reports showing the impact of this project</p> <p>Component 2: Construct and equip new training centres</p> <p>Activity 2.1: Develop construction plan including EIA and select contractor to construct new training centres at selected sites Output: Detailed construction plan; selected contractor, EIA report</p> <p>Activity 2.2: Implement construction and monitor it Output: Constructed buildings and facilities (Agricultural training centres will be constructed on the same compound and/or on the same land as the agricultural research centres so as to strengthen the relationship between research and training functions.</p> <p>Activity 2.3: Recruit required staff Output: Newly employed staff start work at new training</p> <p>Activity 2.4: Train newly employed teaching staff Output: Teaching staff instructing the standardized curriculum with a high quality of</p> <p>Activity 2.5: Develop vision, mission, rules, collaboration system, detailed annual plans including training curriculums and training contents for all new training centres Outputs: Vision, mission, rules, collaboration among the training centres, annual plan, training curriculum and materials</p> <p>Activity 2.6: Procure necessary equipment for field practice and laboratories, furniture and teaching materials Output: Properly equipped training centres</p> <p>Activity 2.7: Prepare for starting the centres' activities Output: Brochures of the centres, training plans, list of trainees, schedule sheet for training. New training courses identified (in consultation with state ministries), Trainees selected by state ministries</p> <p>Activity 2.8: Monitor and evaluate quality of training courses at every centre Output: Monitoring and evaluation reports, used to improve</p>
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2.3 Service providers and beneficiaries

(1) Description of service	Directorate of Agricultural Education and Training of MAFCRD provides technical and
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Items	Information										
providers within the framework of the project:	financial support. Director and staff of CTC Yei support the project team fully. State government officers and other project staff plan and select government staff such as extension officers and other trainees to be trained.										
(2) Description of beneficiaries within the framework of the project:	Government agricultural extension officers, community development officers, cooperative officers, other government officers related to agriculture, community based extension workers, NGO extension workers, selected core farmers, staff of MAFCRD										
2.4 Outcomes, impact and contributions to value added (i.e. economic growth)											
(1) Outcomes and impact:	<ul style="list-style-type: none"> • Strengthened functions of CTC Yei with more courses and better quality of training classes • New agricultural training centres with necessary equipment and trained teaching staff • Improved and/or standardised curriculums, class contents, and teaching skills • Increased number of trainees • More effective and efficient agricultural extension services provided to farmers by trainees graduating from the centres • Improved collaboration among the agricultural training centres 										
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)										
2.5 Environmental and social impact, and mitigation measures											
(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1" style="width: 100%;"> <tr> <td style="width: 20%;">Negative: b</td> <td>Project:</td> </tr> <tr> <td>Positive: c</td> <td>a: is likely to have minimal or little impact on the environment and/or society</td> </tr> <tr> <td></td> <td>b: may have an impact on the environment and/or society</td> </tr> <tr> <td></td> <td>c: is likely to have a significant impact on the environment and/or society</td> </tr> <tr> <td></td> <td>d: will have a significant impact on the environment and/or society</td> </tr> </table>	Negative: b	Project:	Positive: c	a: is likely to have minimal or little impact on the environment and/or society		b: may have an impact on the environment and/or society		c: is likely to have a significant impact on the environment and/or society		d: will have a significant impact on the environment and/or society
Negative: b	Project:										
Positive: c	a: is likely to have minimal or little impact on the environment and/or society										
	b: may have an impact on the environment and/or society										
	c: is likely to have a significant impact on the environment and/or society										
	d: will have a significant impact on the environment and/or society										
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • Constructing new buildings for establishing 7 training centres will create some negative environmental impacts. For example, upon constructing buildings and facilities, large areas of land clearance might be necessary. • Staff and students will use water in the dormitories and dining hall. Therefore, development of guidelines to minimize environmental impacts is suggested. <p>(Positive)</p> <ul style="list-style-type: none"> • Strengthening CTC Yei and the creation of more training opportunities through establishing new training centres will have a positive impact for improving quality and availability of agricultural extension services. 										
2.6 Monitoring and evaluation for impact measurement											
(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • Number of available and implemented classes at CTC Yei • 9 teaching staff working at CTC Yei 										
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • Number of agricultural training centres (7 new ones, 8 in total) • Number of available and implemented classes at CTC Yei and other new training centres • Number of teaching staff at CTC Yei and other established training centres (sex disaggregated) • Amount of budget and number of funding source for CTC Yei and other new training centres 										
(3) Methods of measurement and sources of information:	Records of training centres, reports from the training centres to MAFCRD, monitoring and evaluation report, other project reports										
(4) Responsible parties for the monitoring and evaluation:	Directorate of Agricultural Education and Training of MAFCRD, state Ministries of Agriculture										
2.7 Required human resources											
(1) Principle of human resources management:	Capacity building will be the basic principle in the project, but some activities are outsourced to outside experts since the project period is limited. Cooperative relationships with the state government officers are important for smooth project implementation. Number of administration staff for the CTC Yei should remain the same.										
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> • Project manager (one senior staff from the Directorate of Agricultural Education and Training) • Project staff (three staff, one from the Directorate of Agricultural Education and Training, one from the Directorate of Planning, and one from Directorate of Agriculture Production and Extension Services) for project detailed design, conduct of needs assessment, project implementation and management, procurement, logistics, and monitoring, etc. • State government staff, when their state is selected for establishment of a training centre, will cooperate and support project implementation 										
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Consultants in the field of:</p> <ul style="list-style-type: none"> • Project management (Master's degree, 15-years experience): One • Education and training (BA, 5-years experience or more): One • Agronomy (BSc or BA, 10-years experience or more): One • Project coordinator (BA in Education or Agriculture, 3-years experience or more): One • Trainers to train new teaching staff and improve teaching quality (BA, 7 years experience or more, expected to be outsourced locally or nationally): Two 										

Items	Information					
2.8 Risk assessment with respect to project objectives and resources to be applied						
(1) Expected level of risk:	<table border="1"> <tr> <td>H</td> <td>L: Low</td> <td>M: Medium</td> <td>H: High</td> <td>(select an indicator from the list)</td> </tr> </table>	H	L: Low	M: Medium	H: High	(select an indicator from the list)
H	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	<p>The following risks should be considered.</p> <ul style="list-style-type: none"> • Difficulties of finding sufficiently large and accessible lands in each selected location to establish new training centres • Difficulties of clarifying and/or securing government budget allocation and execution to strengthen CTC Yei and establish new training centres • Difficulties of finding sufficient qualified teaching staff • Difficult to find appropriate construction companies in a timely manner • Insecurity and conflicts at target sites and interview sites • Unfavourable road conditions to implement the project 					
2.9 Other special considerations and/or notes						
(1) Other special considerations and/or notes:	<ul style="list-style-type: none"> • Selection of the locations to establish new training centres will be carried out by the “Development of research institution infrastructure” project, but it should be jointly conducted with this project as much as possible, in order to find the most appropriate locations with sufficient land. If it is difficult to conduct the needs assessment jointly, close communication between the staff of these two projects will help. • Securing budget to operate all the training centres is critical to maintain the impact of the project in the long term. Staff salaries and general operation costs of the training centres are provided from the government budget, but cost recovery efforts need to be made by all the training centres. • Facilities for the training centre in Yambio are planned to be shared with the agricultural vocational training centre planned for Yambio, but the facilities are constructed by this project. 					
2.10 Routine operation and required resources after the completion of the project						
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>Periodic monitoring on training courses at all the training centres should be conducted by the Directorate of Agricultural Education and Training of MAFCRD jointly with staff of the training centres. Directorate of Agricultural Education and Training of MAFCRD should make certain that the quality and variety of training courses meets the needs of trainees in the long term.</p>					

01.16 Strengthening and establishment of training institution infrastructure project (cont.)

SSP/USD = 4

Project duration	Phase 1		Phase 2		Phase 3		Phase 4		Total																				
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000	USD '000	% to total	
2 Provision of training services to the private sector																													
3 Equity investments																													
4 Provision of loans																													
5 Social assistance/donation (Emergency)																													
T total (SSP '000)			37,579	34,082	3,283	329	329	329	329	329	329	450															77,368	19,342	100%
T total (USD '000)			9,395	8,520	821	82	82	82	82	82	82	112																	
% to total			49%	44%	4%	0%	0%	0%	0%	0%	0%	1%															100%	100%	

Public sector project
Routine work by government
Private sector project
Routine work by private sector

2.4.17 Enhancement of private sector agro-input providers project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Crop		
(2) Project name:	Enhancement of private sector agro-input providers project		
(3) Project ID:	0 1 1 7 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2018/19	Ending FY: 2027/28	Duration (years): 10
(5) Total investment:	SSP 20,710,000	USD 5,178,000	Note: Not including recurrent cost
(6) Name of this file (automatic):	CAMP Project profile format v9.1.docx		

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		CR.SA8	Agricultural inputs	Table 2-3
(2) Government organisation:	12	MAF-PE	Directorate of Agriculture Production and Extension Services	Table 2-6
(3) Activity types:	303	PS-TR	Private sector- Trade	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	X
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>Although South Sudan has high potential in its agriculture, yields and efficiency of production are lower than other countries in the region. According to the CAMP Situation Analysis (SAR), most farmers surveyed spend little on inputs such as fertilisers, pesticides, and quality seeds. This was mainly because it was costly and it would be difficult to make a profit, if they used agricultural inputs. This tendency was seen across the country in the SAR.</p> <p>Most farmers have not used either fertilisers or pesticides, so if they could use them, there would be a high possibility to increase yields and to reduce the risk for crops to be damaged by pests. However, there are no standards or regulations about appropriate use for fertilisers and pesticides. Most farmers, even extension officers, have little knowledge about how to use fertilisers and pesticides. Lack of standards and regulations increase the risks of finding low quality and/or adulterated fertilisers and pesticides in the markets.</p> <p>The number of agro-input providers is also limited. They are only found in five out of the ten states according to the SAR. This situation restricts the opportunities for farmers to have access to safe and quality fertilisers and pesticides at affordable prices. Accessibility and price are critical factors for farmers to determine whether they use fertilisers and pesticides or not. This needs to be improved through this project.</p> <p>Additionally, the difficult business environment for agro-input providers hampers business opportunities for both current and potential agro-input providers. The government needs to provide tax exemptions and lower interest rates for loans. Weak purchasing power is another obstacle for agro-input providers to overcome. Establishment of local, regional, and/or national associations of agro-input providers would help the members to purchase agricultural inputs in bulk with lower costs. Technical support to establish associations would strengthen the business capacity of agro-input providers.</p> <p>Limited information, about existing domestic importers, foreign agro-input providers, and manufacturers of agricultural inputs, restrains business opportunities for agro-input providers. Linking these actors would enhance business opportunities and create new value chains for trading agricultural inputs.</p> <p>Correct information about how to use fertilisers and pesticides safely will be essential to promote the use of agricultural inputs by farmers. Thus, training will be provided to agro-input providers and Agricultural Extension Workers (AEOs), Community Development Officers (CDOs), Cooperative Officers (COs), and NGO staff so that they can inform farmers and Community Based Extension Workers (CBEWs) about the correct use of fertilisers and pesticides.</p>
(2) Objectives:	<ul style="list-style-type: none"> • Increased number of domestic private sector agro-input providers • Better business capacity of agro-input providers • Conducive business environment for potential and existing agro-input providers
(3) Overall description including temporal and spatial extent of project:	<p>Creating a conducive business environment for agro-input providers and building the capacity of existing and potential private sector agro-input providers will be critical aspects of the project so as to enhance the availability of agro-inputs in South Sudan.</p> <p>The development of legislation (laws, standards and regulations) about fertiliser and pesticide use will be carried out in the first six months of the project. Parliamentary approval etc. may take time, but the project should support this. Project activities will continue based on the draft legislation. The new legislation will first be applied to major cash crops and staple crops so as to increase yields with the use of fertilisers and pesticides; other crops will follow.</p> <p>Legislation to improve the business environment for agro-input providers will be developed in the first and second years of the project. Again parliamentary approval etc. will take time and the project will support this.</p> <p>Preparation and provision of training on the correct use of fertilisers and pesticides, as well as business management, will be implemented in the third year. Training sessions will be carried out every year for current and potential agro-input providers. These training sessions will be provided by the government agriculture training centres at various locations. Thus, staff at the training centres need to be trained to deliver the sessions.</p> <p>Strengthening linkages between stakeholders, such as domestic agro-input providers, foreign agro-input providers, foreign manufacturers and importers of agro-inputs, is an important activity. Holding forums involving current and potential domestic providers would</p>

Items	Information
(4) Component and activity structure:	<p>create business opportunities. Forums including domestic and foreign providers are planned to be held towards the end of the third year of the project. These forums will be held across the country depending on the progress of business development and availability of agro-input providers.</p> <p>Component 1: Establishment of national standards and regulations about fertiliser and pesticide use Component 2: Establishment of conducive business environment for agro-input providers Component 3: Provision of training to potential and existing agro-input providers about starting and operating a business, and how to use fertilizers and pesticides Component 4: Strengthen and/or create linkages with domestic and foreign agro-input providers and manufacturers of agro-inputs</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs	<p>Component 1: Establishment of national standards and regulations about fertiliser and pesticide use</p> <p>Activity 1.1: Conduct assessment on current situation of fertiliser and pesticide use across the country Outputs: Assessment report, confirmed current situation of fertiliser and pesticide use</p> <p>Activity 1.2: Conduct assessment on current situation of fertiliser and pesticide use in neighbouring countries (Kenya and Uganda) Outputs: Assessment report, current situation of fertiliser and pesticide use in nearby countries includes existing exporters of agro-inputs and manufacturers</p> <p>Activity 1.3: Develop draft legislation (national act, standards and regulations) and guidelines and manuals for fertiliser and pesticide use based on the results of the assessments Outputs: Draft legislation, guidelines, and manuals for fertiliser and pesticide use (Activities 1.3 and 1.4 need to be coordinated closely with "<u>Establishment of a National Phytosanitary System project</u>". Legislation etc. for seeds will be developed by the "<u>Quality standards and quality control for agricultural products project</u>." One officer from state ministry of agriculture will be invited from each state. Rest of the participants will come from Juba. Core staff from the "<u>Establishment of a National Phytosanitary System project</u>" and "<u>Quality standards and quality control for agricultural products project</u>." will also be invited.)</p> <p>Activity 1.4: Support MAFCRD to submit draft legislation with guidelines and manuals for fertiliser and pesticide use to parliament for approval Outputs: Approved legislation, guidelines, and manuals for fertiliser and pesticide use (the new legislation will first be applied to major cash crops and staple crops so as to increase yields with the use of fertilisers and pesticides; other crops will follow.)</p> <p>Activity 1.5: Distribute legislation, guidelines, and manuals for fertiliser and pesticide use to concerned people Outputs: Commonly understood and accepted legislation, guidelines, and manuals for fertiliser and pesticide use by government officers of MAFCRD, state Ministry of Agriculture and AEOs, CDOs, COs, and CBEWs as well as aid organisations and agro-input providers</p> <p>Component 2: Establishment of conducive business environment for agro-input providers</p> <p>Activity 2.1: Conduct baseline survey on current number of agro-input providers and details of their business, business environment for agro-input providers, and existence of potential agro-input providers Outputs: Baseline survey report including numbers and other detailed information about existing and potential agro-input providers</p> <p>Activity 2.2: Support developing and passing a bill to provide tax exemptions to existing and newly established private sector agro-input providers for the first ten years of business Outputs: Tax exemptions for newly established private sector agro-input providers for the first ten years of business</p> <p>Activity 2.3: Support developing and passing a bill to make loans available to private sector agro-input providers at lower interest rates from a government bank for the first ten years of business Outputs: Lower interest rate loans available to private sector agro-input providers for the first ten years of business (these loans may be from the existing government bank - Agricultural Bank of South Sudan)</p> <p>Activity 2.4: Support formation of associations for agro-input providers Outputs: Established and functioning associations of agro-input providers (regional and/or state-wide) so as to purchase fertilisers and pesticides in bulk at lower prices</p> <p>Activity 2.5: Establish monitoring system for compliance with the act, standards, and regulations as well as the bills for tax exemption and credit system for private sector agro-input providers Outputs: Knowledge of compliance with the act, standards, regulations, tax</p>
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Items	Information
	<p>exemptions and credit system related to fertilisers and pesticides, and agro-input providers</p> <p>Activity 2.6: Provide ongoing technical support to agro-input providers and established agro-input associations on business development and management, and fertiliser and pesticide use</p> <p>Outputs: Technically supported agro-input providers with up to date knowledge</p> <p>Component 3: Provision of training to potential and existing agro-input providers about starting and operating a business, and how to use fertilizers and pesticides</p> <p>Activity 3.1: Develop training plans, curriculums, training contents, and materials about appropriate ways to handle and use fertilisers and pesticides</p> <p>Outputs: Training plans, curriculums, contents and materials developed</p> <p>Activity 3.2: Conduct training for trainers about fertiliser and pesticide use</p> <p>Outputs: Trainers of the government training centres knowledgeable and able to provide training on fertiliser and pesticide use</p> <p>Activity 3.3: Provide training to current and potential agro-input providers about appropriate use of fertilisers and pesticides</p> <p>Outputs: Current and potential agro-input providers knowledgeable about appropriate use of fertilisers and pesticides (Training includes information about standards and regulations about fertiliser and pesticide use. This activity should be closely coordinated with “<u>Establishment of a National Phytosanitary System project</u>” to avoid duplication of the contents as well as maximising effects of training that each project will provide.)</p> <p>Activity 3.4: Provide training to AEOs, CDOs, COs, and NGO staff about appropriate use of fertilisers and pesticides</p> <p>Outputs: AEOs, CDOs, COs, and NGO staff knowledgeable about fertiliser and pesticide use (Training includes information about standards and regulations about fertiliser and pesticide use. Key information will be shared with CBEWs by AEOs, CDOs, and COs through their routine work.)</p> <p>Activity 3.5: Develop training plans, curriculums, training contents, and materials about business development and management</p> <p>Outputs: Training plans, curriculums, training contents, and materials</p> <p>Activity 3.6: Provide training to potential agro-input providers about business development and management</p> <p>Outputs: Potential agro-input providers knowledgeable about business development and management (Training includes information about bills about tax exemptions, lower interest rates of loans, and establishment of associations.)</p> <p>Component 4: Strengthen and/or create linkages with domestic and foreign agro providers and manufacturers of agro-inputs</p> <p>Activity 4.1: Develop a list of foreign exporters and manufacturers, and domestic importers of agro-inputs with their profiles</p> <p>Outputs: List of foreign exporters and manufacturers, and domestic importers of agro-inputs with their profiles</p> <p>Activity 4.2: Organise a forum for domestic agro-input providers and potential agro-input providers to exchange information about business management as well as opportunities</p> <p>Outputs: Information about business skills and opportunities provided to potential domestic agro-input providers by existing domestic agro-input providers</p> <p>Activity 4.3: Organise a forum to match foreign exporters, foreign manufacturers, domestic importers of agro-inputs, domestic agro-input providers and/or potential agro-input providers, and domestic seed growers to create business opportunities</p> <p>Outputs: Exchanged information about each other’s business and contacts among participants (Establishing a business linkage between agro domestic agro-input providers and domestic seed growers will be important.)</p> <p>Activity 4.4: Conduct end of project survey to identify availability of fertilisers and pesticides as well as business situations of agro-input providers in 10 states</p> <p>Outputs: Survey report</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:

Directorate of Agriculture Production and Extension Services, private sector agro-input providers, importers of agro-inputs

(2) Description of beneficiaries within the framework of the project:

Direct beneficiaries are private sector agro-input providers. Indirect beneficiaries are farmers.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:

- Regulatory framework and standards for fertiliser and pesticide use are clarified.
- More agro-input providers are available across the country.
- More agricultural inputs which meet standards will become available at markets with

Items	Information
(2) EIRR and/or FIRR, and/or other economic analysis:	<p>lower prices.</p> <ul style="list-style-type: none"> Linkages among agricultural agro-input providers, exporters, and manufacturers are strengthened and business opportunities are enhanced. <p>(if applicable) Not applicable</p>

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: b Positive: d</td> <td> <p>Project:</p> <p>a: is likely to have minimal or little impact on the environment and/or society</p> <p>b: may have an impact on the environment and/or society</p> <p>c: is likely to have a significant impact on the environment and/or society</p> <p>d: will have a significant impact on the environment and/or society</p> </td> </tr> </table>	Negative: b Positive: d	<p>Project:</p> <p>a: is likely to have minimal or little impact on the environment and/or society</p> <p>b: may have an impact on the environment and/or society</p> <p>c: is likely to have a significant impact on the environment and/or society</p> <p>d: will have a significant impact on the environment and/or society</p>
Negative: b Positive: d	<p>Project:</p> <p>a: is likely to have minimal or little impact on the environment and/or society</p> <p>b: may have an impact on the environment and/or society</p> <p>c: is likely to have a significant impact on the environment and/or society</p> <p>d: will have a significant impact on the environment and/or society</p>		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <p>No significant negative environmental impacts are expected because there is no construction planned through the project. No negative social impacts are expected either. However, if standards and regulations are not complied with, inappropriate use of pesticides (for example, excessive use) may cause negative environmental impacts to both soil and human bodies.</p> <p>(Positive)</p> <p>The project will help enhance business opportunities for domestic agro-input providers and improve the availability of fertilisers and pesticides. Improvement of accessibility of fertilisers and pesticides with lower prices would help farmers increase their yields and protect their crops from pests and diseases. Adopting standards and complying with the regulations for fertiliser and pesticide use would ensure their quality. An increase in production volumes of agricultural products would create opportunities for farmers to improve their incomes and enhance their business opportunities.</p>		

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> Number and varieties of fertilisers and pesticides available in South Sudan Prices of available fertilisers and pesticides in South Sudan Number and locations of existing agro-input providers in South Sudan
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> Existence of standards and regulations for fertilisers and pesticides Number and varieties of fertilisers and pesticides available in South Sudan Prices of available fertilisers and pesticides in South Sudan Number and locations of existing agro-input providers in South Sudan Knowledge level of agro-input providers and other concerned people about appropriate use of fertilisers and pesticides Number and locations of associations for domestic agro-input providers
(3) Methods of measurement and sources of information:	Research report, survey report, training records, legislation, project reports, other government documents, other related project reports
(4) Responsible parties for the monitoring and evaluation:	Directorate of Agriculture Production and Extension Services, Directorate of Plant Protection, state Ministries of Agriculture

2.7 Required human resources

(1) Principle of human resources management:	Capacity development of agro-input providers in business management and appropriate knowledge about agricultural products will be the key for the success of this project. Thus, finding potential and committed agro-input providers and supporting them will be crucial.
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> Project manager from MAFCRD (one senior staff from the MAFCRD, Directorate of Agricultural Production and Extension Services, grade 3 or 4) Project staff from MAFCRD (three staff, one staff from the Directorate of Agricultural Production and Extension Services, one staff from Directorate of Plant Protection, one from the Directorate of Research) for project detailed design, conduct of needs assessment, project implementation and management, procurement, logistics, and monitoring, etc. Senior inspector in the state Ministry of Agriculture (one from each state as a focal point) (These project staff from the state Ministry of Agriculture support the above project team to implement the project.)
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Consultants in the field of:</p> <ul style="list-style-type: none"> Project management (Master's degree, 15-years experience): One Quality control about agro-inputs (BA or BSc, 10-years experience or more): One Business development and trade (BA or BSc, 10-years experience or more): One Training and project coordination (BA or BSc, 5-years experience or more): One <p>Training will be provided by government training centres.</p> <p>Baseline and end of project survey in 10 states will be outsourced to local NGOs and/or local consultants</p>

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	M L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	<ul style="list-style-type: none"> Compliance with the standards and regulations will influence the availability of quality fertilisers and pesticides. Regulatory enforcement will be important to reduce the availability of non-standard fertilisers and pesticides at markets.

Items	Information
	<ul style="list-style-type: none"> • Limited access to financial support from financial institutions for agro-input providers would constrain their business opportunities. • Lack of marketing and opportunities for bulk buying would keep prices high

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	<ul style="list-style-type: none"> • This project is related to "<u>Quality standards and quality control for agricultural products project.</u>" and "<u>Establishment of a National Phytosanitary System project.</u>" Thus, it will be necessary to hold periodical meetings among the project staff of these three projects to have a collaborative relationship among them. It would be ideal to conduct monitoring and evaluation on fertiliser and pesticide use as well as identification of agro-input providers with the staff of these two projects. • Establishing a value chain linkage between domestic agro-input providers and domestic seed growers, which would be supported by the "<u>Quality standards and quality control for agricultural products project</u>", through the matching forum will be important to utilise existing resources to lower the cost and prices of agro-inputs. • Development of legislation (act and regulations) to submit to parliament will be critical for enforcement of standards developed. This must be done swiftly after collecting all the necessary information and discussing with the stakeholders.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>Monitoring and evaluation on compliance with the regulations as well as identifying availability of fertilisers and pesticides which meet the standards should be routine activities during and after the completion of the project. Follow up on trained agro-input providers should also be a part of routine activities during and after the completion of the project to assess and support their business development. Hence, budget for these routine activities needs to be included as a budget item of the Directorate of Agriculture Production and Extension Services, the Directorate of Plant Protection, and state Ministries of Agriculture.</p>
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2.4.18 Enhancement of tractor hire service provider project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Crop		
(2) Project name:	Enhancement of tractor hire service providers project		
(3) Project ID:	0 1 1 8 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2017/18	Ending FY: 2026/27	Duration (years): 10
(5) Total investment:	SSP 8,936,000	USD 2,234,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		CR.SA4	Private sector projects and businesses	Table 2-3
(2) Government organisation:	12	MAF-PE	Directorate of Agriculture Production and Extension Services-	Table 2-6
(3) Activity types:	203	SP-EX	Service delivery/infra. dev.- Extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFPP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	41	PSI	Private sector Investment	X
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>For commercial farming to progress and be successful in South Sudan, mechanization through the use of tractors and tractor implements is essential. Large scale farming can simply not take place without the availability of tractors. It is not feasible for every farmer in South Sudan to purchase a tractor because of the extremely high cost. However, farmers can contract with tractor service providers to do the farm work necessary. Tractor services provides a good service for both the private tractor owner who makes a living providing this service, and of course the farmer who benefits from growing and harvesting crops without needing expensive capital input. The major constraint facing South Sudan however is the low number of tractors. Agriculture production is increasing, thus increasing the demand for tractor services. The current number of tractors providing services in the country is not adequate.</p> <p>There are further constraints with mechanization in South Sudan. The tractors that do exist and provide services are not well maintained because of a lack of technical knowledge of the tractor owners and mechanics. Spare parts are also difficult to find and must be imported from surrounding countries which takes time. When utilizing tractor services time is important and waiting unproductive. The work needs to be done in a very short time frame, such as harvesting crops within a certain period. Tractors that break down and cannot receive spare parts quickly hurt the income of the farmer and the owner providing the tractor service.</p> <p>Tractors are not the only mechanized farm equipment lacking in South Sudan. A tractor is no good without the appropriate implements to complete the farm work. Implements include equipment that is attached to the back of the tractor and powered by the tractor using a power-take off (PTO) system. Examples of implements include cultivators, discs, harrows, seed drills, broadcast seeders, fertilizer spreaders, and large pesticide spray tanks. Implements are needed to plough the fields, then ploughed fields must be smoothed out with a harrow for seed bed preparation. Seed drills are needed to plant the seeds. Spray tanks are used to kill noxious weeds and harmful insects once the crops start to grow. Fertilizer spreaders spread fertilizer across the fields periodically throughout the year to improve soil fertility.</p> <p>There is an immediate need for public technical assistance in South Sudan for private sector tractor service providers, in the areas of tractor maintenance and repair, proper use of tractors and their implements for crop production, and linkages provided between tractor owners and spare parts dealers.</p>
(2) Objectives:	<ul style="list-style-type: none"> • Provide in-depth training and technical assistance to tractor service providers and their employees in the areas of tractor and implement maintenance and repair. • Create tractor service provider associations to enable individuals to access parts and equipment with increased ease due to operating as a “cooperative” group instead of individuals • Identify potential private investors willing to start new tractor service businesses and provide linkages with the government and NGO’s for tax breaks and credit services. • Identify potential private sector individuals willing to start spare part supply chains in South Sudan and provide technical assistance for them in creating this business.
(3) Overall description including temporal and spatial extent of project:	<p>Tractor service is a business and therefore led and developed by the private sector. The public sector will play an important role is providing technical assistance and training to the private sector utilizing international and national experts. The government will also play a key role in adopting policies that enable transparent and simple import processes for private sector individuals to bring in tractors, implements, and spare parts. The customs process must be simplified and high customs taxes eliminated. Also there must be tax break policies in place for those individuals wanting to start spare part businesses, tractor mechanic shops, and tractor/implement dealerships within the country. The government could be an enormous hindrance to commercial agriculture in South Sudan if they do not create a conducive, honest, and transparent system that welcomes private investment.</p> <p>MAFCRD extension officers in partnership with international consultants will need to conduct an in-depth survey of the current operational tractor service companies, skill level of tractor mechanics, where spare parts are being purchased, and what the government needs to do provide a more conducive atmosphere for this industry. While this assessment is taking place, promotion of tractor service business opportunities will take place and individuals interested in investing in this type of business will be recorded. Public sector experts both international and national will then work with these private investors and newly formed producer associations to enable the businesses to progress successfully.</p>
(4) Component structure:	<p>Component 1: Assessment and increase awareness Component 2: Creation of tractor service associations</p>

Items	Information
	Component 3: Training, program development, and creation of linkages Component 4: Technical assistance for newly started tractor service businesses Component 5: Technical assistance for the establishment of private sector tractor spare parts supply chain

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Assessment and increase awareness</p> <p>Activity 1.1: An assessment team consisting of international and national specialists will conduct a 6 month assessment of the utilization of tractor service providers, skill level of mechanics working on tractors and equipment, types of implements available for tractor work, and where tractor owners are obtaining their spare parts. During the time the assessment is being conducted this same team will look to recruit private investors that are willing to start new tractor service business and/or spare part supply stores. Also a list of individuals interested in forming tractor service associations will also be recorded for later use.</p> <p>Outputs: Up to date knowledge of the tractor service providers and their business. List of potential investors. The assessment team will consist of the following:</p> <ul style="list-style-type: none"> • 1- international assessment consultant • 2- MAFCRD extension officers with experience in farm mechanization • This assessment team will take 6 months to gather data, analyse results, and publish an assessment document. The assessment campaign will take place in all 10 states. <p>Component 2: Creation of tractor service associations</p> <p>Activity 2.1: A team consisting of international and national specialists will take the recorded list of interested farmers provided by the assessment team and work to form government registered tractor service associations.</p> <p>Outputs: Registered tractor service associations. At least 2 trips will be made to each state by the association development team (20 trips total). The association development team will consist of the following people:</p> <ul style="list-style-type: none"> • 1- international consultant specializing in producer association development. • 1- international farm machinery consultant • 2- MAFCRD extension officers with experience in farm mechanization • 10- state agricultural extension officers (AEOs) (1 per state). • This output will take 6 months to complete. A state extension specialist would only be utilized when the main association team visits the state where that particular state specialist is assigned. <p>Component 3: Training, program development, and creation of linkages</p> <p>Activity 3.1: A training team consisting of international and national consultants will create training curriculum on the following subjects: creating by-laws for producer associations; producer association operating procedures; and utilizing producer associations for better economic returns; tractor and implement maintenance schedules, implements available for various stages of crop production, tractor safety, most common problems associated with tractors and implements and spare parts that should be stock-piled to address these problems, basic mechanical repairs for tractors and implements.</p> <p>Outputs: Trained tractor service providers able to provide a timely, quality service. The training team will consist of the following</p> <ul style="list-style-type: none"> • 1- international producer association consultant • 1- international farm machinery consultant • 2- MAFCRD extension officers with experience in farm mechanization • 10- state AEOs • Approximately 50 AEOs at county level. These county workers would only be utilized when training are taking place in the county or adjoining counties where they are assigned and/or reside. • The team national team consisting of the 2 international consultants and 2 MAFCRD officers will take 3 months to create the training curriculum. Once the training curriculum is developed then training will take place for each of the newly developed tractor service provider associations. It is expected that there will be at least 1 tractor service association in each state. <p>Approximate training schedule:</p> <ul style="list-style-type: none"> • Approximately 50 farmers per state including 1 state extension specialist and 5 county workers, total would be approximately 56 people per state. Initial training would take place for 5 days, 8 hours per day. The initial training would take place once in each state. After all the states have received the initial training, a second training phase would take place again consisting of 5 days, 8 hours per day for each of the 10 states. The first state trained during the initial training would be the same state where the second phase of training would begin.
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Items	Information
	<ul style="list-style-type: none"> • Total training time for both initial and second phase training would be 6 months. • Once the AEOs at state and county level are trained by the international and national team they would then be expected to provide follow up training and routine technical assistance to farmers. <p>Component 4: Technical assistance for newly started tractor service businesses</p> <p>Activity 4.1: A team consisting of international and national consultants will work individually with private investors who have expressed interest in starting tractor service businesses. This team will also work privately with those tractor service providers that are already functioning.</p> <p>Outputs: New and current tractor service providers understand their business better. A team of the following individuals will work with interested private sector individuals:</p> <ul style="list-style-type: none"> • 1- international agribusiness consultant with experience in farm machinery • 1- international farm machinery consultant • 2- MAFCRD extension officers with experience in farm mechanization <p>This specialized training team would work directly with the individuals at their farms on in-depth training including business management, financial record keeping, marketing of their services, tractor and implement mechanical maintenance and repair, improved methods of crop production utilizing mechanization, and creating linkages with tractor and implement dealers in regional countries. The training team would travel to the individual's farm for "hands on" training. It is possible that a number of interested people in close proximity could travel to participate in training at just one location instead of the training team traveling to each individual location. This training would consist of 8 hours per day, 5 days per week for 4 weeks at each location. It is hard to predict how many private investors will come forward wanting to start this type of business. An anticipated training schedule would be 10 locations for a total of 40 weeks of training.</p> <p>Component 5: Technical assistance for the establishment of private sector tractor spare parts supply chain</p> <p>Activity 4.1: A team consisting of international and national consultants will work individually with those individuals (identified during the farm machinery assessment) wanting to start a spare parts supply chain business.</p> <p>Outputs: 5 new tractor dealerships. A team consisting of the following will work with at least 5 private sector individuals for a period of 1 year:</p> <ul style="list-style-type: none"> • 1- international agribusiness consultant with experience in farm machinery • 1- international farm machinery consultant • 2- MAFCRD extension officers with experience in farm mechanization <p>This team will provide technical assistance by helping to create linkages with the government, NGOs and regional supply companies in obtaining credit and import licenses to bring in tractors, implements, spare parts, and other farm machinery to sell in South Sudan. The team consisting of the 4 specialists and 5 private investors would travel to at least 3 regional countries in Africa to see how successful farm machinery stores operate. Each trip would consist of 1 week. Total would be 9 people for 3 total weeks in regional African countries.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	Service providers would be international consultants with experience in conducting surveys and/or assessments; organizing producer associations; extensive experience with tractors and farm machinery and overall agriculture experience. From the public sector national MAFCRD extension officers with extensive experience in farm mechanization would be utilized along with state and county extension workers.
(2) Description of beneficiaries within the framework of the project:	Primary beneficiaries are commercial farmers who will benefit from the availability of tractors and implements to plant and harvest their crops. Secondary beneficiaries are tractor service providers, equipment dealers and farm input suppliers that would benefit from increased business due to more farm machinery available and well trained individuals utilizing the machinery.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	Commercial farmers with no access to tractor mechanization will benefit from tractor service providers for planting, harvesting, spraying, and fertilizing their crops. This available technology will increase yields for farmers thus increasing their income and create overall food security for the people of South Sudan.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the	Negative: c Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society
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Items	Information
right):	c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> Through the project, if more tractor hire services are available, more tractors would be operated on a normal road to move from a place to place. Hence, tractors may damage a road surface and/or become a cause of traffic accidents. More injuries during the tractor operation may occur, if the numbers of tractor hire services are larger. Additionally, if more tractors are used, there is a possibility that many trees are cut down to make land available for farming. It may cause significant negative environmental impacts. Therefore, appropriate land use plan needs to be developed before the numbers of the tractor hire services are increased. <p>(Positive)</p> <ul style="list-style-type: none"> Increased capacity for commercial farmers to increase yields, increase incomes, and provide food security for South Sudan through the use of modern tractors and implements. The impacts on farmers are expected to be significantly positive.

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	Inadequate data on farmers utilizing tractors and implements.
(2) Measurable indicators and situation at the end point:	Number of trained tractor service providers starting new businesses.
(3) Methods of measurement and sources of information:	Registered producer association records, training attendance sheets, annual reports from state and county extension workers.
(4) Responsible parties for the monitoring and evaluation:	Directorate of Agriculture Production and Extension services- Department of Agricultural Mechanization and Department of Extension Services

2.7 Required human resources

(1) Principle of human resources management:	International consultants with at least a Master's degree would be needed for providing technical assistance in the form of conducting assessments, organizing producer associations, and farm machinery expertise. Mid-career level MAFCRD extension officers at the national level and entry level to mid-level state and county extension workers would be needed at the state and local levels.
(2) Required human resources in the public sector (Positions, grades and numbers):	Public sector human resources would consist of the following: <ul style="list-style-type: none"> 2- MAFCRD officers with experience in farm mechanization and extension work (mid-level specialists) 10- state AEOs (entry or mid-level specialists) Approximately 50 AEOs at county level (entry or mid-level specialists)
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<ul style="list-style-type: none"> 1- international producer association consultant. 1 year assignment 1- international farm machinery consultant. 2 ½ year assignment 1- international agribusiness consultant. 2 year assignment 1- international assessment consultant. 6 month assignment

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	H L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	The risk associated with this project is high. Tractors and implements are dangerous equipment that kills hundreds of people each year in farm accidents. Tractor safety training will need to be conducted for all tractor service providers. <ul style="list-style-type: none"> Possible difficulties to find sufficient numbers of private investors Insecurity (armed insurgence and ethnic clashes) at project sites and/or nearby areas Thefts of tractors and implements Unavailable spare parts for tractor maintenance Unfavourable conditions of access roads to reach beneficiaries' fields Gender disparity (negative cultural and customary practices)

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	This will be a private sector led project.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>Human resources (on-going):</p> <ul style="list-style-type: none"> 2- MAFCRD officers with experience in farm mechanization and extension work (mid-level specialists) 10- state AEOs (entry or mid-level specialists) Approximately 50 AEOs at county level (entry or mid-level specialists) <p>Other on-going expenses:</p> <ul style="list-style-type: none"> Laptops for each worker Transportation allowance for workers to provide routine technical assistance to farmers in their assigned states and counties. Communication allowances (cell phone and internet) Routine office supplies and maintenance
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Items	Information
	<p>Please note: The above routine human resources and expenses are duplicated from the CAMP "Enhancement of animal power utilization" project. This will need to be taken into consideration for costing purposes.</p>

2.4.19 Tractor operator training project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Crop		
(2) Project name:	Tractor operator training project		
(3) Project ID:	01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2017/18	Ending FY: 2026/27	Duration (years): 10
(5) Total investment:	SSP 18,987,000	USD 4,747,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		CR.SA7	Mechanisation and animal power	Table 2-3
(2) Government organisation:	12	MAF-PE	Directorate of Agriculture Production and Extension Services	Table 2-6
(3) Activity types:	209	SP-EI	Service delivery/infra. dev.- Economic infrastructure development	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>Tractors can enhance farming activities such as ploughing, sowing, and harvesting. Tractors could be used for many crops and many progressive farmers and commercial farmers try to expand the size of their farms, but due to unavailability of sufficient manpower, it is difficult to carry out. During the situation analysis of the CAMP conducted in 2013, it was found that existing tractor hire services have large numbers of customers waiting for ploughing at their farms. The demands for tractors seemed to be the same in all the states. Additionally, in some areas such as Renk, many large sized farms exist and the soil is suitable for tractor use. Thus, the potential for tractor use is high, but the number of available tractors is limited.</p> <p>Part of the reason for the limited number of businesses hiring tractors is the limited number of tractor operators. Also, the number of training institutions which could provide training about tractor operation is limited. Through the CAMP situation analysis, it was found that only one vocational training centre in Malakal and Yei Agricultural Training Centre (YATC) provide tractor operation training courses in the country. No other government agricultural training centre provides this training. Currently, some tractor operators in South Sudan are from Uganda where there are large numbers of tractor operators.</p> <p>Breakdowns of tractors restrict the availability of tractors. Breakdowns are due to inadequate maintenance skills, lack of spare parts, and poor farm conditions. In some forest covered areas, such as the Greenbelt zone, most farms are small in size and trees and tree stumps require more skill to avoid damage to the tractors. Moreover, unskilled tractor operators do not have sufficient knowledge about soil texture and moisture to judge the depth of ploughing. Therefore, improvement of the skills of tractor operators is necessary to reduce the numbers of breakdowns. Classes about basic repair should be included in tractor operation training.</p> <p>Furthermore, there is no national tractor driver's license or operating standards. The Ministry of Interior is trying to create a drivers' license for tractor operation, but it has not yet been implemented. This project should provide technical support to the concerned Directorate of the Ministry of Interior to adopt and/or develop the standards required to obtain a licence. Standardised training courses about tractor operation do not exist. Establishment of national standards for tractor operation and development of an operation manual are both needed. A new training curriculum should be developed taking into account the new standards and operation manual. Trainees who complete the tractor training course will obtain a national driver's license for tractor operation. Trainers for the tractor operation training courses need to be trained so they can provide these courses at government agricultural training centres.</p>
(2) Objectives:	<ul style="list-style-type: none"> • Increase and improve knowledge and teaching skills of trainers for training tractor operators • Improve skill levels of tractor operators
(3) Overall description including temporal and spatial extent of project:	<p>This project will cover the whole country since agriculture is the mainstay of the people of South Sudan.</p> <p>Firstly, past training for tractor operators and existing training curriculums will be investigated; safety will be considered. Standards for safe tractor operation and an operation manual will be developed to be used during and after training. Training curriculum will be developed from the tractor operation standards. Certificates would be issued for the trainees after the standardised training is completed.</p> <p>Trainers, who will instruct tractor operators, will be trained at the Crop Training Centre in Yei (CTC Yei). These courses will be instructed by trainers from YATC and/or a foreign country such as Uganda. They will then provide safe tractor operation courses at training centres across the country. They will use the standardised curriculum; courses will be composed of theoretical and practical components. Selected agricultural extension officers (AEOs) and community based extension workers (CBEWs) will attend the training. They will then be able to provide technical support and answer farmers' questions about tractor operation. Training will also be open to ordinary people at the agricultural training centres. The operation manuals will be distributed to all state, county and payam offices, agricultural extension officers (AEOs) and training centres. AEOs and CBEWs will use this material to raise awareness about safety standards, correct tractor operation, environmental impact etc.</p> <p>Additionally, the training curriculums will be shared with existing vocational training centres to standardise the contents and quality of tractor operation training. These activities will continue until the end of the project. Initially, government training centres will provide</p>

Items	Information
(4) Component and activity structure:	<p>training to meet the high demand of tractor operation. However, the function of providing this training should be taken over by the private sector in the long term.</p> <p>Component 1: Identify requirements for safe tractor operation, develop training curriculum, tractor operation standards and operation manual</p> <p>Component 2: Provide training of trainers (TOT) and procure tractors for training</p> <p>Component 3: Provide training for tractor operators</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1: Identify requirements for safe tractor operation, develop training curriculum, tractor operation standards and operation manual</p> <p>Activity 1.1: Review past training for tractor operators and existing training curriculums Outputs: Knowledge of current situation for training tractor operators</p> <p>Activity 1.2: Assess tractor use across the country Outputs: Report about tractor use including types of tractors used in different areas</p> <p>Activity 1.3: Develop operation standards, manual for tractor operation, and guidelines for environmental impact; provide technical support to the Ministry of Interior for development of driver's license Outputs: Tractor operation standards, manual for tractor operation as well as guideline to mitigate negative environmental impacts, national driver's license system</p> <p>Activity 1.4: Develop training curriculums of safe tractor operation for trainers as well as for normal trainees in line with the operation standards and operation manual Outputs: Training curriculums and materials for trainers and regular trainees</p> <p>Component 2: Provide training of trainers (TOT) and procure tractors for training</p> <p>Activity 2.1: Strengthen functions of CTC Yei so they can provide training on tractor operation; provide tractors with spare parts Outputs: CTC Yei ready to provide tractor operation training using new standardised curriculum</p> <p>Activity 2.2: Identify potential trainers and train them Outputs: Selected 16 teaching staff from government training centres and 5 teaching staff of vocational schools across the country (Each training centre nominates two trainers for tractor operation training. For the TOT, CTC Yei hosts the training, but teaching staff of CTC Yei should also attend the training to learn how to teach a tractor operation training course. Total numbers of participants are expected to be 21. Trainers will learn both electronic and manual type tractor operation.)</p> <p>Activity 2.3: Develop and provide safety videos and training materials, including written exams, to be given to trainers Outputs: Trained trainers with necessary materials to conduct training courses</p> <p>Activity 2.4: Procure and provide tractors to government agricultural training centres for tractor operator training Outputs: Agricultural training centres equipped with tractors</p> <p>Component 3: Provide training for tractor operators</p> <p>Activity 3.1: Provide tractor operation training to AEOs and CBEWs at training centres across the country (The training should include a practical field operation component. It will include instruction and practicals about daily maintenance and servicing, basic functional principles of tractors operation.) Outputs: 60 AEOs and 240 CBEWs trained about tractor operation</p> <p>Activity 3.2: Provide tractor operation training to potential tractor operators at training centres across the country Outputs: 1,000 people are trained as tractor operators and obtain licenses</p> <p>Activity 3.3: Provide operation manuals and guidelines based on operation standards to state, county, payam government offices as well as to AEOs. Outputs: Operation manuals and guidelines of tractor referred to and used by government officers and AEOs.</p> <p>Activity 3.4: Share the training curriculums of tractor operation with existing vocational training school to promote standardisation of contents and quality of the tractor training course. Outputs: 5 vocational training schools with improved training curriculums of tractor operation using the standard curriculum.</p> <p>Activity 3.5: Set an appropriate tuition fee to collect from trainees so as to recover the cost to provide training for tractor operation Outputs: Tractor operation training run on a cost recovery basis</p> <p>Activity 3.6: Assess the impact of the tractor operation training, including: safety issues and changes in harvest volumes and profit levels of farmers who used tractor services Outputs: Report on situation after the tractor operation training</p>
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2.3 Service providers and beneficiaries

Items	Information
(1) Description of service providers within the framework of the project:	Directorate of Agriculture Production and Extension Services of MAFCRD, government agricultural training centres, state Ministries of Agriculture, AEOs, and CBEWs
(2) Description of beneficiaries within the framework of the project:	Direct beneficiaries are tractor operators. Indirect beneficiaries are trainers for tractor operation training course, AEOs, and CBEWs. Other indirect beneficiaries are farmers who want to farm with tractors and tractor services operators.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<ul style="list-style-type: none"> • National tractor operation standards are known and accepted by farmers. • More trained trainers who can provide tractor operation training course are available. • More trained tractor operators based on the national standards are available. • Tractor operation and training contents for tractor operation are standardised. • The number of tractor breakdowns is reduced. • The quantity of harvest is increased compared to the time prior to the project starts. • The number of injuries and death caused by tractor operation is reduced.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: c</td> <td>Project:</td> </tr> <tr> <td>Positive: d</td> <td>a: is likely to have minimal or little impact on the environment and/or society</td> </tr> <tr> <td></td> <td>b: may have an impact on the environment and/or society</td> </tr> <tr> <td></td> <td>c: is likely to have a significant impact on the environment and/or society</td> </tr> <tr> <td></td> <td>d: will have a significant impact on the environment and/or society</td> </tr> </table>	Negative: c	Project:	Positive: d	a: is likely to have minimal or little impact on the environment and/or society		b: may have an impact on the environment and/or society		c: is likely to have a significant impact on the environment and/or society		d: will have a significant impact on the environment and/or society
Negative: c	Project:										
Positive: d	a: is likely to have minimal or little impact on the environment and/or society										
	b: may have an impact on the environment and/or society										
	c: is likely to have a significant impact on the environment and/or society										
	d: will have a significant impact on the environment and/or society										
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • Through the project, if more tractor operators are available, the possibility of more tractor hire businesses and services is increased. Then, more tractors would run on normal roads to move from place to place; tractors may damage road surfaces and/or cause traffic accidents. More injuries during tractor operation may occur, if the number of tractor operators is larger. Additionally, if more tractors are used, there is a possibility that more trees are cut down to make land available for farming. All this may cause significant negative environmental impacts. Thus, an appropriate land use plan needs to be developed. Also, when the national standards for tractor operation are developed, guidelines to mitigate negative environmental impacts also need to be developed. <p>(Positive)</p> <ul style="list-style-type: none"> • If more tractor operators become available, the efficiency of farming should be improved. Larger scale farming could also become possible for farmers. These factors could contribute to increased production volumes and/or reduce production costs. More training opportunities for potential tractor operators may provide more job opportunities in the agricultural sector. These are positive impacts that should be considered. 										

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • Limited numbers of available tractor operators • No government agricultural training centres provide a training course about tractor operation
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • Established national standards for tractor operation acknowledged by the public • Commonly used manuals and guidelines for tractor operation • Standardised training curriculum and materials about tractor operation • 1,000 trained tractor operators with licenses • Trained 60 AEOs and 240 CBEWs on tractor operation with licenses • Improved operation and maintenance for tractors • Increased volume of harvest of the farmers who used tractor services
(3) Methods of measurement and sources of information:	Training records, project reports and documents, assessment reports, available documents of MAFCRD
(4) Responsible parties for the monitoring and evaluation:	MAFCRD, Directorate of Agriculture Production and Extension Services

2.7 Required human resources

(1) Principle of human resources management:	It is a national project, but support from the state Ministry of Agriculture would be necessary for some activities. Thus, a focal person for this project should be nominated by each state office.
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> • Project manager from MAFCRD (one senior staff from the MAFCRD, Directorate of Agricultural Production and Extension Services, grade 3) • Project staff from MAFCRD (two staff from the Directorate of Agricultural Production and Extension Services, Department of Agricultural Mechanization; the Department of Agricultural Extension Services should provide qualified staff; one senior and one junior inspectors in grades 7 and 9) for project detailed design, conduct of needs assessment, project implementation and management, procurement, logistics, and monitoring, etc. • Staff at State Ministry to support project activities in the target areas
(3) Required human resources in the private sector including	Consultants in the field of: <ul style="list-style-type: none"> • Project manager (Master's degree or more, 15 years' experience): One

Items	Information
consultants (positions, qualification and numbers):	<ul style="list-style-type: none"> • Agricultural mechanisation engineer (BSc. Mechanization, 5 years' experience or more): One • Agricultural extension specialist (BSc. or BA, 5 years' experience or more): One • Training/Project coordination (BA. or BSc, 3 years' experience or more): One

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	L	L: Low	M: Medium	H: High	(select an indicator from the list)
(2) Explanation of expected risks:	<p>The following risks should be considered.</p> <ul style="list-style-type: none"> • Possibly difficult for trained tractor operators to find employment opportunities • Insecurity and conflicts at some target sites 				

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	<p>This project is related to the situation of the tractor hiring business which is planned to be strengthened by the "Enhancement of tractor hire service providers" project. Even if large numbers of tractor operators were trained, if the tractor hire business is not well developed, there would be insufficient opportunities for the trained tractor operators to use their skills. Also, availability of spare parts in the country could adversely affect opportunities for tractor operators. To maximise impact of the project, it is important that trained operators are close to tractor hire businesses. Close coordination with the above mentioned project as well as other related projects such as the "Establishment of Tractor assembly plant" project would be important.</p> <p>Cost recovery efforts are necessary after the training courses are set up and functioning well in the government training centres. Appropriate fee should be set and collected to achieve cost recovery, especially since demand is expected to be high. Later, the function of training tractor operators will be moved from the government institutions to the private sector. Thus, during the project period, opportunities for the private sector to start training tractor operators will be sought; cost recovery efforts would encourage the private sector to take this over in the future.</p>
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>Regular technical support by the AEOs and CBEWs will be necessary to solve farmers' problems and answer their questions. They will share information and knowledge about tractor operation with farmers during and after the project period. Information about the tractor operation should be included in one of the regular reporting items from CBEWs and AEOs for the project team to identify problems and follow up.</p>
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Part 3: Project cost estimation

Project duration	SSP/USD = 4																										
	Phase 1			Phase 2			Phase 3			Phase 4			Total														
Cost group	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000	% to total
1 Management and operation of project																											
1 Deployment of government staff																											
1 Need assessment survey (per diem)				40																							79
2 Need assessment survey (transportation)				22																							22
3 Performance assessment survey (per diem)				18																							18
4 Performance assessment survey (transportation)																											18
2 Procurement of administrative services (contracted)				96																							96
1 Printing of operation manuals and guideline				96																							96
3 Procurement of professional services (contracted)				2,376	2,376	1,885	1,599	411	411	411	246	285	491														10,452
1 International consultant (project management)				900	900	720	630	180	180	180	90	90	180														4,050
2 International consultant (agricultural mechanisation)				320	320	240	240	80	80	80	40	80	120														1,600
3 International consultant (extension)				400	400	320	200	40	40	40	40	40	40														1,400
4 International consultant (training/project coordination)				756	756	605	529	151	151	151	76	76	151														3,402
4 Implementation of staff training				223	918	918																					2,059
1 Meeting with stakeholders for development of operation standard				3																							3
2 Meeting for development of curriculum (venue)				3																							3
3 Meeting for development of curriculum (per diem)				3																							3
4 Meeting for development of curriculum (transportation)				2																							2
5 Tractor trainers training (per diem)				176																							176
6 Tractor trainers training (transportation)				21																							21
7 Tractor training for AEOs and CBEWs (per diem)				840																							840
8 Tractor training for AEOs and CBEWs (transportation)				18																							18
9 Tractor training for AEOs and CBEWs (transportation)				60																							60
10 Meeting with vocational centres (per diem)				6																							6
11 Meeting with vocational centres (transportation)				10																							10
5 Implementation of research, studies and surveys																											
6 Delivery of extension and training services to the private sector																											
7 Operation and maintenance																											
2 Construction of infrastructure and procurement of equipment				800	4,800																						5,600
1 Construction of office buildings																											
2 Construction of research, training and other specialized buildings																											
3 Construction of feeder roads																											
4 Construction of production, market and transportation facilities																											
5 Acquisition of land																											
6 Procurement of vehicles																											
1 Tractor with spare part to CTC Yei				800	4,800																						5,600
2 Tractors to 6 new agricultural training centres																											800
3 Subsidies, equity and loans																											4,800
1 Provision of cash and/or in-kind subsidies																											700
2 Provision of training services to the private sector																											700
3 Equity investments																											700
4 Provision of loans																											175

01.19 Tractor operator training project (cont.)

Project duration	SSP/USD = 4												Total SSP '000 USD '000	% to total												
	Phase 1			Phase 2			Phase 3			Phase 4																
Cost group	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	
5 Social assistance/donation (Emergency)																										
Total (SSP '000)				3,535	8,094	2,903	1,699	511	511	511	346	385	491													
Total (USD '000)				884	2,024	726	425	128	128	86	96	123														
% to total				19%	43%	15%	9%	3%	3%	2%	2%	3%														

Public sector project
Routine work by government

Private sector project
Routine work by private sector

2.4.20 Urban and peri-urban vegetable production and marketing project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Crop		
(2) Project name:	Urban and peri-urban vegetable production and marketing project		
(3) Project ID:	0 1 2 0 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2017/18	Ending FY: 2026/27	Duration (years): 10
(5) Total investment:	SSP 12,783,000	USD 3,196,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		CR.SA6	Horticultural crop production	Table 2-3
(2) Government organisation:	12	MAF-PE	Directorate of Agriculture Production and Extension Services	Table 2-6
(3) Activity types:	203	SP-EX	Service delivery/infra. dev.- Extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	X
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	X
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

<p>Urban and peri-urban agriculture (UPA) can be considered in South Sudan as so far largely an untapped source of employment and income. UPA has the potential to improve the food security and nutrition of disadvantaged urban residents, including IDPs. Together with investments in irrigation facilities, it can also provide a steady source of income. Selling to institutional, up market buyers, such as hotels, restaurants, hospitals, UN camps, etc. may even generate a mark-up of around 10%, but the hospitality industry is a market which is only accessible to well-developed producer groups who can deal with the requirements in terms of quality and quantity. Less advanced producers will not be able to access this high-value market segment, but by being able to sell vegetables at local markets, they will increase their income, and hence be more resilient against external shocks.</p> <p>Currently, the country imports about 90% of its fruits and vegetables from neighbouring countries. In Juba, an average of 12 trucks full of horticultural crops (mainly onions, tomatoes, Irish potatoes, banana, cabbages, and green peppers) enters the main market at Konyokonyo daily. It is estimated that 44,640 metric tons of horticultural crops are supplied to Juba per year with estimated value of about SSP 223.2 million (USD 75 million)/year.</p> <p>UPA has a comparative advantage over rural farming due to its proximity to urban consumers and lower, if any, transport and cooling costs. Refrigeration is particularly important to reduce post-harvest losses for perishable products such as vegetables, but represents a major cost factor in South Sudan where electricity is scarce. Post-harvest losses can also be reduced through proper (uncooled) storage and packaging.</p> <p>This project will focus on low cost methods to:</p> <ul style="list-style-type: none"> • increase the production of vegetables through encouraging urban and peri-urban residents to farm in their backyards if available and on idle communal land; and improving agro-economic practices: use of (organic) fertilizers, change producers' attitude to a more business-like approach, encourage collective business plan writing of producer groups • introduce irrigation for year-round supply • reduce post-harvest losses through piloting with appropriate packaging • link producer groups and agro-input providers with Banks (e.g. Agricultural Bank or Cooperative Bank) to access subsidized inputs and equipment • increase access to markets through linking groups to buyers • move from spot-market to longer term seller-buyer relationships (i.e. meet the requirement of institutional buyers in terms of quality and quantity) <p>Constraints to be addressed are:</p> <ul style="list-style-type: none"> • General lack of data on UPA in South Sudan • Inefficient agricultural knowledge and skills amongst urban and peri-urban farmers and a lack of (access to) knowledge • Inexistent agricultural extension services at city-level • Lack of access to inputs (quality seeds, tools, etc.) • Lack of access to water (and pumping and irrigation equipment) during dry seasons • Lack of access to credit • Lack of proper post-harvest handling techniques/ equipment • Lack of access to profitable markets <p>The project deliberately does not focus on specific vegetables, but will rely on market assessments of major target markets (all state capitals apart from Unity and Upper Nile) to determine demand and select those horticultural products that are most suitable to meet the demand under given agronomic conditions. Due to their ubiquity, it is assumed that tomatoes will play an important role in all states; reducing the enormous amount of post-harvest losses (up to 30%), caused by transporting tomatoes in jerry cans, will be addressed through developing appropriate packaging for transport.</p> <p>To increase the sustainability of the project and to nurture the still nascent private sector, the project will work with and in support of the private sector. Agro-dealers will have a role to play in providing quality seeds. They will be supported to ensure that quality seeds (planting materials) reach the farmers accordingly. The selection of types and varieties of seeds recommended to farmers by extension agents will be based on the products identified by the above-mentioned market assessments. Farmers will be provided with vouchers for subsidized seeds which they can redeem at the agro-dealer shops.</p> <p>All state capitals offer a favourable environment for production of horticultural crops</p>

Items	Information
(2) Objectives:	<p>throughout the year using irrigation. Small-scale irrigation practices include using watering cans, treadle pumps and sometimes motorized pumps. Currently, there seems to be a limited supply of irrigation pumps. Local agro-dealers should be encouraged to access loans so that irrigation water pumps (10-20 HP/ treadle pumps) will be available in the local market for the farmers. The local dealers, in addition to providing training to farmers on operating pumps, and operation and maintenance practices, would have the possibility of supplying spare parts for the pumps. The number of farmer groups/farmers requiring implements makes supplying them an attractive business case for agro-dealers.</p> <p>The objective of the project is to gradually substitute imports of vegetables and to increase both production and consumption levels of vegetables in South Sudan.</p> <p>On a macro level, that will contribute to food self-sufficiency and to reducing the food deficits that have characterized the country for decades.</p> <p>On a micro level, UPA will increase food security and have a positive effect on the nutritional value of daily food intake. For urban dwellers it offers an opportunity to earn cash income. It contributes to economic growth and to feeding a growing urban population. The project's beneficiaries consist of farmer groups and individual farmers. The number of beneficiaries is estimated to be 4000 (about 2000 female and 2000 male farmers; about 400 farmers per state capital), depending on the existence and interest of urban and peri-urban farmers/ farmer groups to take part in the project.</p>
(3) Overall description including temporal and spatial extent of project:	<p>The project will start in 2017 and last for 10 years. Due to the nature of the project short-term gains can be presumed. When, after 10 years the project is phased-out, it is expected that (through the training they have received as part of the project) farmers/ farmer groups, the private sector and banks have developed viable business cases to be able to continue their operations without external assistance. Subsidies of inputs will also cease when the project comes to a close. However, extension officers are expected to continue to provide state-of-the art follow-up training to ensure the uptake of innovations in R&D such as suitable seeds, fertilizers, and mechanised inputs (irrigation pumps).</p> <p>The project's intervention area covers all state capitals apart from Malakal and Bentiu which offer too little irrigation potential for vegetables to be also grown during the dry season. Being able to offer year-round supply, thereby fetching the high prices paid during the dry season, is a prerequisite for supplying institutional buyers and will offset the costs of implements.</p>
(4) Component and activity structure:	<p>Component 1: Baseline survey Collect data needed to plan the project in detail and to be able to monitor progress and eventually impact (i.e. a baseline survey on the current state of the vegetable market) Identify the market potential of the different horticultural products to determine which ones to promote and which beneficiaries and private sector actors (agro-dealers) to work with</p> <p>Component 2: Capacity development of extension agents and farmers Develop the capacity of extension agents to deliver services tailored to the requirements of the target group so farmers can produce quality horticultural products to sell to markets</p> <p>Component 3: Production and marketing Increase productivity of vegetable farmers through technical support by extension agents and strengthen linkages between farmers and market/institutional buyers</p> <p>Component 4: Inputs and equipment Facilitate farmers to obtain loans from financial institutions to purchase agro-inputs and equipment, and strengthen linkage to agro-dealers who sell agro-inputs and equipment</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Baseline survey</p> <p>Activity 1.1: Carry out baseline survey on vegetable production in and around selected state capitals and social aspects of target areas (e.g. tribal conflicts, gender, youth, HIV, etc.)</p> <p>Activity 1.2: Carry out assessment on availability of farmer groups sophisticated enough and willing to embark on producing vegetables for institutional buyers</p> <p>Activity 1.3: Carry-out market assessment to identify horticultural products according to the greatest economic potential (demand) and agronomic suitability</p> <p>Activity 1.4: Carry-out assessment on availability of agro-dealers and select them based on their capacity and willingness to work with the project</p> <p>Outputs: Survey reports (3 local consultants hired for 30 days each)</p> <p>Component 2: Capacity development of extension agents and farmers</p> <p>Activity 2.1: Set up criteria for selecting target farmers, in particular with respect to ethnicity and gender; then, select target farmer groups in a participatory manner</p>

Items	Information
	<p>Activity 2.2: Training of extension agents on horticultural production, market survey, irrigation, soil management, pests and diseases control, appropriate chemical use, post-harvest handling, household record keeping, and gender</p> <p>Activity 2.3: Training of farmers on horticultural production, market survey, irrigation, soil management, pests and diseases control, appropriate chemical use, post-harvest handling, household record keeping, and gender</p> <p>Outputs: 50 extension agents trained and 4,000 farmers (about 2000 female and 2000 male farmers; about 200 farmer groups) trained</p> <p>Component 3: Production and marketing</p> <p>Activity 3.1: Conduct market surveys by extension agents together with farmer groups and select appropriate vegetables from their point of view</p> <p>Activity 3.2: Link farmer groups with institutional buyers and agro-dealers by setting up forum for information gathering and negotiation</p> <p>Activity 3.3: Provide the farmer groups with technical support for vegetable production by extension officers</p> <p>Activity 3.4: Conduct close monitoring and follow-up for the farmer groups by extension agents</p> <p>Activity 3.5: Organise farmers to sell their product collectively and negotiate selling prices with institutional buyers</p> <p>Activity 3.6: Work with private sector to develop improved packaging methods to reduce post-harvest losses during transport</p> <p>Outputs: urban and peri-urban vegetable farmers increase their products and sell to institutional buyers at a higher price with less post-harvesting loss</p> <p>Component 4: Inputs and equipment</p> <p>Activity 4.1: Strengthen farmer groups to facilitate access to loans from the financial institutions to purchase equipment (irrigation, storage, packaging) from agro-dealers</p> <p>Activity 4.2: Provide or sell quality seeds to the farmer groups</p> <p>Activity 4.3: Work with agro-dealers to define a restricted list of low toxicity pesticides which are suitable for use on vegetables by smallholders and improve the quality of advice and instruction provided to customers, especially the illiterate and women</p> <p>Activity 4.4: Equip agro-dealers with skills needed for them to provide basic explanations to farmers on how to handle, operate and maintain irrigation equipment</p> <p>Activity 4.5: Work with agro-dealers to ensure they have spare parts for pumps available</p> <p>Outputs: urban and peri-urban vegetable farmers get access to inputs and equipment such as loans, quality seeds, agriculture chemicals, fertilizers, and irrigation pump with spare parts.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<ul style="list-style-type: none"> • State government: extension agents • Private sector: agro-dealers • DP consultants: to provide training on business skills such as marketing or group business plan writing, etc.
(2) Description of beneficiaries within the framework of the project:	Individual farmers or farmer groups (20-30 farmers) who live in urban and peri-urban areas and have land (e.g. backyards, communal land) at their disposal that they use for farming activities.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	Through improvement of productivity and market access, most of the target subsistence vegetable producers in urban and peri-urban areas will increase their income and improve household food and nutrition security. Also strengthening of domestic vegetable production will contribute to the substitution of imported vegetables and economic growth of urban and peri-urban vegetable farmers.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1" style="width: 100%;"> <tr> <td style="width: 15%;">Negative: b</td> <td>Project:</td> </tr> <tr> <td>Positive: d</td> <td>a: is likely to have minimal or little impact on the environment and/or society</td> </tr> <tr> <td></td> <td>b: may have an impact on the environment and/or society</td> </tr> <tr> <td></td> <td>c: is likely to have a significant impact on the environment and/or society</td> </tr> <tr> <td></td> <td>d: will have a significant impact on the environment and/or society</td> </tr> </table>	Negative: b	Project:	Positive: d	a: is likely to have minimal or little impact on the environment and/or society		b: may have an impact on the environment and/or society		c: is likely to have a significant impact on the environment and/or society		d: will have a significant impact on the environment and/or society
Negative: b	Project:										
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	b: may have an impact on the environment and/or society										
	c: is likely to have a significant impact on the environment and/or society										
	d: will have a significant impact on the environment and/or society										
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • The project might have a negative impact on the environment in case of overuse of agricultural chemicals and chemical fertilizers. A further cause of negative environmental impact may be overuse of water resources in urban margins and pollution of streams and watercourses while washing spraying equipment or runoff from plots. • These potentially negative impacts will be mitigated by providing proper guidance on use of agricultural chemicals and chemical fertilizers and encouraging farmers to use organic fertilizers, such as manure. 										

Items	Information
	<ul style="list-style-type: none"> A negative social impact might be observed if unintended encroachment into public land and open spaces is made by vegetable producers. (Positive) <ul style="list-style-type: none"> The social impact of the project will be mainly positive. The opportunity to earn cash income will contribute significantly to improve livelihoods of target farmers. The nutritional status of the beneficiaries and the urban population in general will improve substantially as availability and affordability of vegetables will increase.

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	A baseline survey will be carried-out at the onset of the project and assess availability, prices, and origins of horticultural products on sale at local markets
(2) Measurable indicators and situation at the end point:	After 10 years the same survey will be carried out to assess how the situation has changed. Since there are problems of attribution, additional assessments among beneficiaries will be carried out on a yearly basis to determine which effects can be traced back to project interventions
(3) Methods of measurement and sources of information:	Surveys at local markets and among beneficiaries
(4) Responsible parties for the monitoring and evaluation:	Project Manager, extension agents, international consultants

2.7 Required human resources

(1) Principle of human resources management:	National ministry will provide oversight, while state ministries implement the project and provide extension services. The private sector will be supported in making the implements (seeds, pumps, spare parts) needed available, while also providing training on O&M of irrigation equipment
(2) Required human resources in the public sector (Positions, grades and numbers):	1 PM at national level, one focal point in each of the targeted states, i.e. 10 in total 50 extension agents
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	Five consultants in the field of: <ul style="list-style-type: none"> Two horticultural experts including 1 team leader (Master degree, 15-year and 5-year experience) One extension expert (MSc or MA, 5-year experience) One pest and disease control (MSc, 5-year experience) One marketing (MSc or MA, 5-year experience) all experienced in working in post-conflict set-ups Three local consultants for baseline survey

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	M L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	(Negative) <ul style="list-style-type: none"> Due to its very weak institutions, working in South Sudan is inherently risky. A precondition for the project to be carried out as outlined is peace or at least low levels of insecurity. If major internal conflict disrupts trade routes for inputs or market infrastructure is destroyed in its course, the project's activities have to be modified accordingly to prevent its failure. This will require additional planning, and potentially result in delays, but it will not affect the necessity to implement the project at all. (Positive) <ul style="list-style-type: none"> The project increases the beneficiaries' and the urban population's resilience to shocks such as conflict and is therefore not dispensable.

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	Selection of appropriate beneficiaries is one of the most sensitive parts of this project. Selection criteria should be discussed and decided with stakeholders in advance and the selection process should be transparent both for beneficiaries and stakeholders. Gender balance and inclusion of youth should also be considered for the selection process.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	Continuous support is needed for the targeted farmers group by extension agents. If extension agents are government officers, the follow-up activities will be done by them as a routine work with minimum cost (fuel for motorbike and some inputs). If extension agents are NGO officers, salary and necessary costs should be required.
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2.4.21 Sesame production project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Crop		
(2) Project name:	Sesame production project		
(3) Project ID:	0 1 2 1 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2020/21	Ending FY: 2029/30	Duration (years): 10
(5) Total investment:	SSP 24,967,000	USD 6,242,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		CR.SA5	Crop production	Table 2-3
(2) Government organisation:	12	MAF-PE	Directorate of Agriculture Production and Extension Services	Table 2-6
(3) Activity types:	302	PS-PR	Private sector - Production	Table 2-12
	203	SP-EX	Service delivery/infra. dev.- Extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	X
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>Sesame is an important oil seed crop which is marketable across the world. Conditions above 23 degrees Celsius are most appropriate to produce sesame. It also grows well in drought conditions. For these reasons, South Sudan has favourable production environments to produce sesame almost over all the country. Currently, the major sesame producers are subsistence farmers. Despite the climate that favours massive production of sesame, farmers grow sesame at a household level primarily for home consumption; developing the crop for commercial purposes is secondary. The absence of large scale commercial production of sesame is hindering South Sudan from fully tapping into the global market.</p> <p>Locally grown sesame was found at markets in 6 states, Western Equatoria, Eastern Equatoria, Western Bahr el Ghazal, Warrap, Jonglei, and Upper Nile states during the situation analysis conducted by CAMP in 2013. It is commonly sold and used across the country. Thus, there is a strong demand for sesame domestically. Additionally, sesame has a high potential for export to Europe and some Asian countries such as Japan, China, and Korea. It could also be exported to neighbouring countries. However, currently, no exports are made from South Sudan while the Republic of Sudan exported 224,137 tons of sesame in 2010⁷. Other African countries such as Ethiopia, Nigeria, and Tanzania are also known as sesame exporting countries. Thus, there is a high demand for sesame in foreign countries and promoting the export of sesame will have a significant impact on agricultural sector transformation.</p>
(2) Objectives:	<ul style="list-style-type: none"> • Train sesame producers to improve their knowledge about sesame production and post-harvest handling • Increase commercial sesame production through distributing certified (high yielding and resistant/tolerant to pests, diseases and drought) seed and extension services • Support sesame producers to be organised so as to have better marketing and business opportunities and bargaining power • Facilitate the export of sesame
(3) Overall description including temporal and spatial extent of project:	<p>The project will start by identifying the current situation of producers and production of sesame in South Sudan. Selecting target areas and farmers and/or farmers' groups will be carried out in the early part of the project. Preparation of training contents and provision of training for agricultural extension officers (AEOs) will be carried out in the 1st component.</p> <p>In component 2, selection of target farmers will be the most crucial element in the early part of the project. It will be carefully implemented with full provision of necessary information to prospective farmers. This project needs the commitment of the selected farmers.</p> <p>Support to farmers to organise groups and/or cooperatives will be undertaken in the early part of the project as a key activity for component 3. Training for improvement of production methods and techniques to core farmers will be provided in the early part of the project. The selection process of core farmers needs to be carefully conducted, as the in-field training done by these core farmers will be a crucial factor for project outputs. Follow up technical support will be carried out by AEOs and Community Based Extension Workers (CBEWs) not only during the in-field training period, but also done as routine work of these extension officers in the entire project period.</p> <p>In the early to middle parts of the project (component 4), marketing and support in establishing business relationships by producers with middlemen, wholesalers, and exporters will be a critical activity. Quality control, delivering the ordered volumes of sesame and post-harvest disease control will be important and may affect the outcomes of the project. These factors need to be carefully addressed.</p>
(4) Component and activity structure:	<p>Component 1: Assessment of current situation of sesame producers and their production, and market demands</p> <p>Component 2: Formation and promotion of farmers' groups, associations, and cooperatives</p> <p>Component 3: Support to increase productivity of sesame and improve post-harvest handling</p> <p>Component 4: Promotion of marketing and export</p>
2.2 Detailed description of project component, activity and outputs	
(1) Component, activity and outputs:	<p>Component 1: Assessment of current situation of sesame producers and their production, and market demands</p> <p>Activity 1.1: Conduct baseline survey about sesame producers, sesame production, and market demand and value chains of different types of sesame at different locations</p>

⁷ Hala Ahmed Elamin, March 2011. *Sudan Trade Point: Management of Promotion and Studies and Investment Department of Studies, Report No. 18, Sesame.*

Items	Information
	<p>in 10 states. Outputs: Baseline survey report about sesame production and market demands in 10 states</p> <p>Activity 1.2: Identify the most effective farming practices and varieties in each livelihood zone through the baseline survey, information from research centres, and secondary data about sesame Outputs: Information about most appropriate sowing dates, optimum harvesting time, most suitable soil conditions, most effective varieties for each livelihood zone</p> <p>Activity 1.3: Identify options for profitable methods to sell sesame at each major market in 10 states based on baseline survey, and other secondary data Outputs: Strategies to increase profits of sesame farmers</p> <p>Activity 1.4: Confirm availability of seeds for the most effective varieties of sesame for each livelihood zone Outputs: Information about availability of seeds and procurement methods as well as prices</p> <p>Activity 1.5: Develop course contents and materials for sesame production training for agricultural extension officers (AEOs) and core sesame farmers Outputs: Developed training contents and materials for AEOs and core farmers</p> <p>Activity 1.6: Select and train AEOs, cooperative officers (COs), and Community based Extension Workers (CBEW) about sesame, includes effective production methods, soil management, weed control, pests and diseases control, optimum harvesting time, post-harvest handling and marketing Outputs: 50 trained AEOs, 10 trained COs, 200 CBEWs</p> <p>Component 2: Formation and promotion of farmers' groups, associations, and cooperatives</p> <p>Activity 2.1: Develop criteria to select core sesame farmers Outputs: Criteria to select core sesame farmers to form and/or promote groups (Years of sesame farming experience, size of land, yield, gender, income level, proximity to each other and to major markets, etc.)</p> <p>Activity 2.2: Conduct social impact assessment on target sites to mitigate any negative impacts by selecting sesame farmers and/or farmers' groups (e.g., tribal conflicts, land tenure issue, gender disparities, exclusion of youth, increase of HIV, etc.) Outputs: Social impact assessment report</p> <p>Activity 2.3: Select prospective farmers and/or farmers groups based on the criteria and hold meetings with them to explain about the project Outputs: Prospective sesame farmers who understand the project purpose, activities, and outcomes through involvement with it</p> <p>Activity 2.4: Select core farmers and/or farmers' groups who are willing to cooperate with this project to organise appropriate forms of groups Outputs: Selected targeted farmers (Tribal balance and gender ratio is considered.)</p> <p>Component 3: Support to increase productivity of sesame and improve post-harvest</p> <p>Activity 3.1: Train core farmers about sesame, includes effective production methods, soil management, weed control, pests and diseases control, optimum harvesting time, post-harvest handling, processing and marketing, basics skills to train other farmers Outputs: 200 trained core farmers (Tribal balance and gender ratio is considered.)</p> <p>Activity 3.2: Train other target sesame farmers selected by the project about sesame includes effective production methods, soil management, weed control, pests and diseases control, post-harvest handling, processing and marketing (Knowledge and skills are disseminated through farmers field schools conducted by the 200 trained core farmers with assistance of AEOs in the field.) Outputs: 3,000 trained farmers about sesame</p> <p>Activity 3.3: Procure and provide the most effective varieties of seeds to grow in each livelihood zone to the trained target farmers as well as other necessary inputs such as pesticides and fertilizers Outputs: 2,000 farmers with the most effective varieties of seeds in their climate condition and necessary inputs</p> <p>Activity 3.4: Conduct follow-up activities on the trained farmers with better varieties of seeds and inputs and provide technical support Outputs: Monthly monitoring for sesame productions and post-harvest handling</p> <p>Activity 3.5: Conduct survey to find out yields of sesame producers Outputs: Survey report about yields</p> <p>Component 4: Promotion of marketing and</p> <p>Activity 4.1: Organise forums where producers and middlemen, wholesalers and/or exporters can interact and establish business relationships to sell sesame Outputs: More business opportunities with linkages among producers, middlemen, and wholesalers</p>

Items	Information
	<p>Activity 4.2: Provide technical support to farmers' groups to collect their harvests and sell them in bulk Outputs: 100 farmers' groups which collect their harvests and sell them in bulk</p> <p>Activity 4.3: Provide training on quality control considering export, packaging, post-harvest disease control, and transport methods of sesame Outputs: 200 trained core farmers with high quality sesame to sell locally or for export</p> <p>Activity 4.4: Train other sesame producers selected by the project on quality control considering export, effective storage methods, packaging, and transport methods of sesame products Outputs: 2,000 trained sesame producers Knowledge and skills are disseminated through demonstration farms and farmers field school conducted by the 200 trained core farmers with assistance of AEOs and CBEWs in the field.</p> <p>Activity 4.5: Support sesame producers to create opportunities for export through linking exporters and sesame producers as well as providing information about opportunities of export and requirements Outputs: Sesame producers exporting sesame</p> <p>Activity 4.6: Conduct survey to identify volumes of sesame sold for export purpose as well as commercial channels Outputs: Survey report about sesame</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	Directorate of Agriculture Production and Extension Services of MAFCRD, State Ministries of Agriculture, AEOs, and CBEWs
(2) Description of beneficiaries within the framework of the project:	Small sesame producers are the main targets for the project, but medium and large scale producers may be selected as target populations for the project. AEOs will be indirect beneficiaries as they will enhance their knowledge and skills about sesame production and sesame processing as well as marketing.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	More commercially oriented sesame producers who can collect their harvest to sell in bulk domestically and internationally with higher quality with increased profits. Sesame processing and selling sesame products and bi-products are more common and systematised. More export of sesame will become possible. Producers' knowledge of sesame production will be higher and the quality of sesame will consistently be improved. Sesame will become known as a highly profitable crop, even though producing large volumes and quality control are difficult.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: a Positive: c</td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: a Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: a Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> Application of fertilisers and pesticides may harm the environment, but the amount of use could be monitored and controlled to reduce negative impacts. Sesame is tolerant of dry environments and does not require large scale irrigation. There is no large scale construction and machinery use is not expected under this project. Thus, negative environmental impacts are minimal. <p>(Positive)</p> <ul style="list-style-type: none"> Sesame is highly marketable and there are strong possibilities of exporting sesame to foreign countries. If the volume of sesame production becomes higher and sufficient volume could be collected in a consistent manner, exports could happen which would have a significant impact on the sesame industry in South Sudan. Increase of profit levels of sesame producers would lead to betterment of their livelihood and standard of living. 		

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> Current production methods of sesame includes land preparation, sowing methods, weeding, harvesting, and post-harvest handling methods as well as yields Common varieties of sesame produced Number of organised farmer's groups and/or cooperatives who produce and sell sesame Routes to sell sesame and selling prices
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> Production methods of sesame includes land preparation, sowing methods, weeding, harvesting, and post-harvest handling methods as well as yields Most effective varieties of sesame to be produced for each livelihood zone

Items	Information					
	<ul style="list-style-type: none"> • Number of organised farmer's groups and/or cooperatives who produce and sell sesame • Routes to sell sesame and selling prices • Number of farmers exporting sesame and its volumes and prices as well as destination countries • Profits levels of sesame producers 					
(3) Methods of measurement and sources of information:	Situation analysis report, survey reports, other project reports and records, training records, reports from AEOs, balance sheets of farmers and/or farmers' groups					
(4) Responsible parties for the monitoring and evaluation:	Directorate of Agriculture Production and Extension Services of MAFCRD, State Ministries of Agriculture, and the project team					
2.7 Required human resources						
(1) Principle of human resources management:	Even though core farmers will be trained and will provide training to other farmers, AEOs and CBEWs will attend the in-field training to provide technical and any logistical support required.					
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> • Project manager from MAFCRD (one senior staff from the MAFCRD, Directorate of Agricultural Production and Extension Services, grade 4 or 5) • Project staff from MAFCRD (two staff, one staff from the Directorate of Agricultural Production and Extension Services, one staff from Directorate of Cooperative Development) for project detailed design, conduct of needs assessment, project implementation and management, procurement, logistics, and monitoring, etc. • Director of extension and senior inspector of extension, grade 7 and inspector of extension, grade 9 and one junior inspector from each state government. These project staff of the State Ministry of Agriculture will work with MAFCRD to implement the project. 					
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	Consultants in the field of: <ul style="list-style-type: none"> • Project manager (Master's degree, 15-year experience): One • Agronomist familiar with sesame (BA or BSc or higher degrees, 10-years experience or more): One • Agricultural extensions/farmers' organisation (BA or BSc, 10-years experience or more): One • Marketing and trading business (BA or BSc, 10-years experience or more): One • Project coordinator (BA or BSc in Agriculture desirable, 3-year experience or more): One 					
2.8 Risk assessment with respect to project objectives and resources to be applied						
(1) Expected level of risk:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; text-align: center;">H</td> <td style="width: 25%; text-align: center;">L: Low</td> <td style="width: 25%; text-align: center;">M: Medium</td> <td style="width: 25%; text-align: center;">H: High</td> <td style="text-align: right;">(select an indicator from the list)</td> </tr> </table>	H	L: Low	M: Medium	H: High	(select an indicator from the list)
H	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	The followings risks shall be considered: <ul style="list-style-type: none"> • Unfavourable weather conditions (late season, little rainfall, droughts, floods) • Short season for planting time and harvest time • Poor road conditions to transport sesame to major cities, borders and/or airports • Outbreaks of pests and diseases e.g. aphids, whitefly, bacterial leaf spot, phyllody etc; • Possible diseases in post-harvest stage such as aflatoxin • Possible difficulties to find sufficient numbers of exporters • Possible difficulties to find sufficient sesame producers who can commit to be involved with the project • Insecurity (armed insurgence and ethnic clashes) at project sites and/or nearby areas 					
2.9 Other special considerations and/or notes						
(1) Other special considerations and/or notes:	In the state level, close coordination and information sharing with the Ministry which is responsible for supervising COs will also be important to have smooth project implementation. Selection of target farmers and target sites may cause negative impacts on the project such as creation of conflicts and sabotage on the project. Hence, a social impact assessment for selection of farmers is considered to be necessary. Disease control and quality control may become key issues to meet the standards of foreign countries to export sesame. Thus, these elements need to be carefully considered and supported by the project.					
2.10 Routine operation and required resources after the completion of the project						
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	Regular technical support by the AEOs and CBEWs will be necessary to solve producers' and processors' problems and to improve their production and/or processing quality. Monitoring and evaluation of the project activities help improve farmers' knowledge and skills, and effectiveness of the project.					

01.21 Sesame production project (cont.)

SSP/USD = 4

Cost group	Phase 1			Phase 2			Phase 3			Phase 4			Total																
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000	% to total		
Project duration																													
6 Forum for export (venue)																													
3 Equity investments																													
4 Provision of loans																													
5 Social assistance/donation (Emergency)																													
T total (SSP '000)						5,379	6,873	3,483	1,856	1,483	641	3,514	539	473	727														
T total (USD '000)						1,345	1,718	871	464	371	160	878	135	118	182														
% to total						22%	28%	14%	7%	6%	3%	14%	2%	2%	3%														

Public sector project
Routine work by government
Private sector project
Routine work by private sector

2.4.22 Fruit and nut production project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector	Crop		
(2) Project name:	Fruit and nut production project		
(3) Project ID:	0 1 2 2 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2025/26	Ending FY: 2034/35	Duration (years): 10
(5) Total investment:	SSP 16,431,000	USD 4,108,000	Note: Not including recurrent cost
(6) Name of this file (automatic):			

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		CR.SA6	Horticultural crop production	Table 2-3
(2) Government organisation:	12	MAF-PE	Directorate of Agriculture production and Extension Service	Table 2-6
(3) Activity types:	203	SP-EX	Service delivery/infra. Dev. -Extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>Due to favourable precipitation patterns, temperatures and soil conditions, some areas of South Sudan have high potential for perennial and annual fruit (e.g. mangos, citrus, papayas, passion fruit, guavas, avocados, jackfruit, bananas, plantains, pineapples and watermelon) and nuts (e.g. cashewnut, etc.) production. However, commercial farming of these fruits and nuts are rarely found.</p> <p>Mangos are grown in many places in the country which are sold in local markets but their quality is not of an international level due to the fibrous nature of the fruit. Citrus fruit (e.g. lemons and oranges), guavas, papayas, passion fruit, avocados, papayas, jackfruit bananas, plantains and watermelon are grown in the Greenbelt zone and part of the Hills and Mountains zone. These are mainly grown for home consumption and only a small quantity is sold in markets, although a large volume is imported from Uganda and Kenya. Pineapples grow in the Greenbelt zone, especially in Western Equatoria state and some are sold in local and Juba markets; however, production potential is not fully capitalised yet due to ineffective access to the markets caused by poor road conditions. Nut production is not common in South Sudan although some areas seem to have potential.</p> <p>Regional fruit markets are very vigorous. According to FAO statistics in 2012, Kenya produced 2.8 million Mt of three types of fruit (i.e. mangoes, mangosteens and guavas), whose value was 1.7 billion USD, 1.4 million Mt of bananas (0.4 billion USD), and 0.5 million Mt of pineapples (0.13 billion USD), as well as 0.2 million Mt avocados (0.13 billion USD). Uganda produced 9.2 million Mt of plantains (1.4 billion USD), and 0.6 million Mt of bananas (0.2 billion USD). Nut production is very common in Kenya. About 29,000 Mt of cashew nuts with shell were produced in Kenya in 2012.</p> <p>To capitalise on these domestic and regional market opportunities, it is crucial for South Sudan to promote fruit and nut production to replace imported fruit and nuts with domestic and seek opportunities for export to neighbouring countries and other potential markets (e.g. EU market).</p>
(2) Objectives:	<p>This project aims to improve fruit and nut production of target farmers so as to contribute to income growth and accelerate agriculture transformation.</p>
(3) Overall description including temporal and spatial extent of project:	<p>The project focuses on the improvement of fruit/nut production farmers. 10,000 existing producers or new young farmers will be targeted.</p> <p>Necessary inputs (e.g. improved seeds/seedlings) and technical support for fruit/nut production will be provided to target farmers by government agricultural extension officers (AEOs), and staff of NGOs.</p> <p>Before starting the extension activities, appropriate types of fruit/nuts and their varieties will be identified based on a rapid assessment and data from horticultural development institutions in neighbouring countries. After the identification of suitable fruit/nuts for each livelihood zone (or state), social assessment and baseline surveys will be conducted to understand social aspects in target areas (e.g. tribal conflicts, land tenure, gender disparity, youth, HIV, etc.) and the production capability of target farmers (e.g. types of fruit/nuts cultivated, farming practices by gender, pest and disease control, post-harvest handling, processing and marketing).</p> <p>Based on the surveys' results, selection of fruit/nut types and varieties in a participatory manner will be conducted by target farmers. Then training contents will be determined. Training courses should be tailored corresponding to target fruit and climate in each target livelihood zone (or state).</p> <p>The project will cover all South Sudan except the Pastoral zone, with a special focus on high potential areas in the Greenbelt zone and high altitude areas in the Hills and Mountain zone. Mangos, citrus fruit (e.g. lemons and oranges), guavas, papayas, passion fruit, avocados, jackfruit and cashew nuts might be the target perennial fruit/nut, whereas pineapple, bananas, plantains and watermelon would be the main targets of annual/or short-term fruit. Small-scale irrigated fruit production will be promoted in collaboration with the "Irrigation Development Master Plan (IDMP)." The project duration is 10 years.</p> <p>Special attention will be paid to ensure equal/equitable participation, contribution and benefit by both women and men at all levels of the project; this might include affirmative action where necessary. Project reporting, monitoring and evaluation will include gender disaggregated data as well as gender specific results. The project will also pay special attention to young farmers' participation.</p>
(4) Component structure:	<p>Component 1: Rapid assessment on fruit/nut production potential and value chain and identification of potential fruit/nuts in each livelihood zone (or state)</p>

Items	Information
	<p>Component 2: Selection of target farmers and baseline survey on fruit/nut production capacity, potential fruit/nut and their markets in each target area</p> <p>Component 3: Strengthen capacity of Farmer Based Organisations (FBOs) through organisational development</p> <p>Component 4: Development of capacity of both extension agents and farmer groups and provision of inputs</p> <p>Component 5: Provision of follow-up technical assistance</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Rapid assessment on fruit/nut production potential and value chain and identification of potential fruit/nuts in each livelihood zone (or state)</p> <p>Activity 1.1: Conduct nationwide rapid assessment on fruit/nut production potential and their value chains</p> <p>Activity 1.2: Collect data and information on fruit/nut production through research institutions in neighbouring countries (e.g. Kenya Agricultural and Livestock Research Organization and National Agricultural Research Organisation in Uganda)</p> <p>Activity 1.3: Identify potential fruit/nuts (annual and perennial) and their varieties based on rapid assessment and data collected through research institutions in neighbouring countries</p> <p>Activity 1.4: Propagate/import appropriate varieties of seedlings/seeds (this will be done after activity 4.2)</p> <p>Outputs: survey reports clarifying suitable types and varieties and potential markets, suitable types and varieties selected in each livelihood zone (or state), improved seedlings imported/produced for distribution</p> <p>Component 2: Selection of target farmers and baseline survey on fruit/nut production capacity, potential fruit/nuts and their markets in each target area</p> <p>Activity 2.1: Conduct social assessment in target areas (e.g. tribal conflicts, conflicts between farmers and livestock keepers, land tenure, gender disparity, youth, HIV, etc.) and environmental assessment for large and medium scale land reclamation</p> <p>Activity 2.2: Select target farmers in accordance with selection criteria developed by stakeholders based on social assessment (with a special focus on youth and gender)</p> <p>Activity 2.3: Conduct baseline survey on target farmers (e.g. yield, area harvested, farming practices by gender, pest and disease control, post-harvest handling, processing and marketing)</p> <p>Activity 2.4: Hold meetings with beneficiaries to have consensus with project approaches and obligations of farmer beneficiaries</p> <p>Outputs: 10,000 farmers selected (about 5,000 females and 5,000 males including more than 50% of young farmers who are less than 30 years old); baseline survey reports clarifying present conditions 100 meetings held and project buy in achieved</p> <p>Component 3: Strengthen capacity of Farmer Based Organisations (FBOs) through organisational development</p> <p>Activity 3.1: Train Cooperative Officers (COs) to conduct training for FBOs</p> <p>Activity 3.2: Assist farmers to develop FBOs that can facilitate collective marketing for domestic and regional markets, access and manage loans, and deliver (demand-oriented) services to their members</p> <p>Activity 3.3: Provide FBOs with information on domestic markets</p> <p>Activity 3.4: Provide FBOs with information on regional markets, export procedures /requirements and quality control measures to facilitate export to neighbouring countries (this activity would be conducted in collaboration with "<u>Quality standards and quality control for agricultural products project</u>".)</p> <p>Outputs 4: 5 trained COs in each state (total 50), and 50 trained FBOs in each state (total 500) import substitution, some products exported</p> <p>Component 4: Development of capacity of both extension agents and farmer groups and provision of inputs</p> <p>Activity 4.1: Conduct training for AEOs and NGO staff on target fruit/nuts production and marketing (e.g. seedling production, transplanting, taking care of seedlings, use of fertiliser, effective weeding (especially for annual fruit), pest and disease control, post-harvest handling including packaging, marketing, and gender) *Training on small-scale irrigation development and its Operation & Maintenance(O&M), and water distribution planning would be handled by IDMP</p> <p>Activity 4.2: Kick off meetings with farmer beneficiaries to clarify planned activities and to select target fruit/nuts to be produced (possibly combination of annual and perennial fruit)</p> <p>Activity 4.3: Conduct technical training for farmer beneficiaries by AEOs and NGO staff to disseminate appropriate fruit/nut production skills</p> <p>Activity 4.4: Distribute necessary inputs for target farmers (e.g. improved</p>

Items	Information
	<p>seedlings/seeds)</p> <p>Activity 4.5: Provide extension services on pest and disease management (this service could be provided by plant doctors who offer diagnostics and advice at mobile clinics, as mentioned in the “<u>National crop pests and diseases control project.</u>”)</p> <p>Activity 4.6: Provide technical assistance on appropriate packaging to prevent losses during the transport to the markets</p> <p>Activity 4.7: Facilitate government financial institutions to provide FBOs with loans to purchase agricultural inputs (e.g. seedlings, seeds, fertiliser, pesticide and appropriate packaging materials for effective transportation)</p> <p>Activity 4.8: Periodic meetings among target farmers to share achievements and issues</p> <p>Outputs: 100 extension agents able to assist target farmers, 10,000 farmers trained and able to improve productivity improved seeds/seedlings distributed, and accessible loans for purchasing additional seeds/seedlings and agricultural inputs</p> <p>Component 5: Provision of follow-up technical assistance</p> <p>Activity 5.1: Conduct periodic follow-up by AEOs and NGO staff</p> <p>Activity 5.2: Carry out end of project surveys on target farmers to measure their achievements (e.g. yield, area harvested, farming practices by gender, pest and diseases control, post-harvest handling and marketing)</p> <p>Outputs: 10,000 farmers followed-up, survey reports prepared showing impact of project</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<p>100 extension agents (e.g. AEOs and NGO staff) and 50 COs</p> <p>Some international and local consultants</p> <p>Staff of government training and research institutes</p> <p>Agro-dealers and financial institutions</p>
(2) Description of beneficiaries within the framework of the project:	<p>Female and male fruit producers and new young farmers who do not have job opportunities, and AEOs</p>

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<p>Through improvement of fruit productivity, most of the target producers and new young farmers and some of their neighbours will improve their livelihood. This situation might greatly contribute to increasing target households' income. Also benefits of the project will be shared fairly among the household members (e.g. adults female and male, and children).</p> <p>Job opportunities would be created for youth.</p> <p>Imported fruit would be substituted by domestic products.</p> <p>Some products would be exported to neighbouring countries and this will contribute to agriculture sector transformation.</p>
(2) EIRR and/or FIRR, and/or other economic analysis	<p>(if applicable)</p>

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: b</td> <td>Project:</td> </tr> <tr> <td>Positive: c</td> <td> <p>a: is likely to have minimal or little impact on the environment and/or society</p> <p>b: may have an impact on the environment and/or society</p> <p>c: is likely to have a significant impact on the environment and/or society</p> <p>d: will have a significant impact on the environment and/or society</p> </td> </tr> </table>	Negative: b	Project:	Positive: c	<p>a: is likely to have minimal or little impact on the environment and/or society</p> <p>b: may have an impact on the environment and/or society</p> <p>c: is likely to have a significant impact on the environment and/or society</p> <p>d: will have a significant impact on the environment and/or society</p>
Negative: b	Project:				
Positive: c	<p>a: is likely to have minimal or little impact on the environment and/or society</p> <p>b: may have an impact on the environment and/or society</p> <p>c: is likely to have a significant impact on the environment and/or society</p> <p>d: will have a significant impact on the environment and/or society</p>				
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <p>A negative social impact might be observed if an unintended encroachment into protected land, public land and open spaces is made by producers. Also reclamation of large land without proper social and environmental considerations would create a serious negative impact to target areas. Overuse of chemical fertilisers and agricultural chemicals would also have a negative impact on the environment.</p> <p>(Positive)</p> <p>The social impact of the project will be mainly positive. Producing enough fruit as cash crops will contribute significantly to increasing the income of target farmers and accelerate economic growth and agriculture transformation. The project pays much attention to social impact. A wide range of farmers will be selected with gender and youth considerations by following selection criteria. The selection processes of target farmers should be transparent in involving local communities and stakeholders.</p> <p>To maintain soil fertility and improve productivity, the project will promote not only chemical fertiliser application but also use of organic fertiliser such as manure and compost. This will have a positive impact on the soil environment.</p>				

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<p>Number of farmers obtaining income from fruit production</p> <p>Amount of South Sudanese fruit produced and sold in domestic markets</p>
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Items	Information
(2) Measurable indicators and situation at the end point:	Increased number of farmers obtaining income from fruit production Amount of South Sudanese fruit produced and sold in domestic and regional markets Number of female and male farmers trained and improving their fruit production skills Number of farmers starting utilising improved seeds/seedlings, organic and chemical fertilisers and mobile plant clinic services if available
(3) Methods of measurement and sources of information:	Baseline and end of project surveys, CFSAM data, NBS census data, custom data
(4) Responsible parties for the monitoring and evaluation:	MAFCRD (Directorate of Agriculture Production and Extension Services) in collaboration with State Ministry of Agriculture will be responsible for monitoring and evaluation. The farmers and extension workers will also work together to conduct self-evaluations.

2.7 Required human resources

(1) Principle of human resources management:	The government does not need to increase the number of government extension officers but will try to improve their efficiency of service delivery, by providing means of transport (bicycle or motorbike) and technical training as well as practical skills to work with gender issues, and introducing performance based evaluation.
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> • Project manager (one Director or Deputy Director) • Project staff at national level (senior inspector level, 2 staff) for project management, procurement, logistics, monitoring • Project staff at state level (one in-charge for each target state, total 10 staff) • Extension agents (e.g. AEOs and NGO staff) (about 100 staff) • COs (about 50 staff)
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Consultants in the field of:</p> <ul style="list-style-type: none"> • One project management (Master degree, 15-years experience) • One perennial fruit/nut production/extension expert (BSc or BA, 5-years experience) • One annual fruit production/extension expert (BSc, 5-years experience) • One social (including gender) and farmer survey expert (BSc or BA, 5-years experience) <p>Local consultants for rapid assessment will be hired. Local consultants for baseline and end of project surveys will be hired.</p> <p>Private agro-dealers will be involved to disseminate information on new technologies for target farmers, such as the use of fertiliser and agro chemicals.</p>

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	M L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	<p>Expected risk level might be medium due to the following reasons.</p> <ul style="list-style-type: none"> • Insecurity of rural areas • Unfavourable conditions of access roads to reach beneficiaries • Conflicts or tensions among beneficiaries, and between beneficiaries and non-beneficiaries • Gender disparity (negative cultural and customary practices) • Delay of input delivery due to inappropriate timing of budget disbursement and limited number of extension staff who deliver inputs • Limited amount of available quality seeds/seedlings • Limited capacity of AEOs and NGO staff and limited means of transport • Natural disasters (e.g. drought, flooding, bird pests, locusts and diseases) • Manmade disasters (e.g. insecurity, raiding, and ethnic conflicts) • Degraded soil fertility by mono-cropping in long-term (long-term risk)

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	Selection of appropriate beneficiaries is one of the most sensitive parts of this project. Selection criteria should be discussed and decided with stakeholders in advance and the selection process should be transparent both for beneficiaries and stakeholders. Gender balance should also be considered for the selection.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>Continuous support is needed for the targeted farmers by extension agents. If extension agents are government officers, the follow-up activities will be done by them as routine work with minimum cost (fuel for motorbike and some inputs).</p> <p>If extension agents are NGO officers, salary and necessary costs would be required.</p>
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Part 3: Project cost estimation

Project duration	SSPIUSD = 4												Total	% to total											
	Phase 1			Phase 2			Phase 3			Phase 4															
	15/16	16/17	17/18	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28			28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39
01.22 Fruit and nut production project																									
Cost group																									
1 Management and operation of project																									
1 Deployment of government staff																									
2 Procurement of administrative services (contracted)																									
3 Procurement of professional services (contracted)																									
1 International consultant (project management)																									
2 International consultant (perennial fruit production/extension)																									
3 International consultant (project annual fruit production/extension)																									
4 International consultant (social/gender and farmer survey)																									
5 Local consultant (rapid assessment)																									
6 Local consultant (baseline and end line survey)																									
4 Implementation of staff training																									
1 Trainings for COs at states (per diem)																									
2 Trainings for COs at states (transportation)																									
3 Trainings for extension agents at states (per diem)																									
4 Trainings for extension agents at states (transportation)																									
5 Implementation of research, studies and surveys																									
6 Delivery of extension and training services to the private sector																									
7 Operation and maintenance																									
1 Fuels for AEOs in baseline survey																									
2 Fuels for meeting of target farmers																									
3 Fuels for farmers training																									
4 Fuels for follow up/periodical meetings																									
5 Fuels for survey																									
2 Construction of infrastructure and procurement of equipment																									
1 Construction of office buildings																									
2 Construction of research, training and other specialized buildings																									
3 Construction of feeder roads																									
4 Construction of production, market and transportation facilities																									
5 Acquisition of land																									
6 Procurement of vehicles																									
7 Procurement of equipment																									
3 Subsidies, equity and loans																									
1 Provision of cash and/or in-kind subsidies																									
1 Improved seeds/seedlings for 10,000 farmers																									
2 Provision of training services to the private sector																									
1 Meetings for target farmers																									
2 Trainings for FBOs at states (per diem)																									
3 Trainings for FBOs at states (transportation)																									
3 Equity investments																									
4 Provision of loans																									
5 Social assistance/donation (Emergency)																									
Total (SSP '000)																									
Total (USD '000)																									
% to total																									

Public sector project
Routine work by government
Private sector project
Routine work by private sector

2.4.23 Development of research institution infrastructure project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Crop		
(2) Project name:	Development of research institution infrastructure project		
(3) Project ID:	0 1 2 3 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2017/18	Ending FY: 2026/27	Duration (years): 10
(5) Total investment:	SSP 58,956,000	USD 14,739,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		CR.SA2	Public sector institution and management capacity development	Table 2-3
(2) Government organisation:	02	MAF-RE	Directorate of Research	Table 2-6
(3) Activity types:	210	SP-EX	Service delivery/infra. Dev.- Social infrastructure development	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	X
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	X
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	
	81	WA	Warrap State	
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>The ultimate goal of the Research Directorate of MAFCRD is to enhance the efficiency and profitability of farmers by increasing the quantity and quality of agricultural products through improvement of technologies. Improvement of quantity and quality of agricultural products would also contribute to improve food security.</p> <p>The majority of farmers in South Sudan are small and medium scale farmers. Normally, these small and medium scale farmers grow several kinds of crops plus one or two main staple crops such as maize, sorghum, and cassava. These crops, including vegetables, are both for home consumption and selling at a market. The volume of crops to sell is limited so these farmers cannot make much profit.</p> <p>In order for these small and medium scale farmers to increase their profits, productivity and/or production volumes need to be improved. However, the land available for cultivation is limited due to high labour costs. Using a lot of inputs is also difficult due to high costs. Therefore, introduction of improved technology and/or seed could be one effective way to improve farmers' productivity and profitability. More research on types of disease should be carried out and findings disseminated to farmers all over the country in a timely fashion.</p> <p>Currently, there are two functioning agricultural research centres in the country. One is the Yei Agricultural Research Centre (YARC) located in Yei, Central Equatoria State. The other is the Palotaka Basic Seeds Centre (PBSC) located in Palotaka, Eastern Equatoria State. More than 35 full-time staff including 5 researchers work for the YARC and about 3 full-time researchers work for the PBSC. YARC and PBSC both conduct basic and adaptive (the use of research in enhancing productivity or solving problem) research and they share research activities. Target crops of the YARC are cassava, maize, upland rice, sorghum, and sweet potatoes. The PBSC mainly focuses on maize, sorghum, rice, cassava, groundnuts, and bananas. Many of their target crops are the same even though YARC is located in Greenbelt livelihood zone and PBSC is located in Hills and Mountains livelihood zone.</p> <p>This project will focus on strengthening agricultural research centres. Functions of the existing research centres will be strengthened and their areas of research should be clearly divided based on their locations and strengths. If there is a gap between their research capacity and farmers' needs, efforts to fill the gap should be made; research centres should conduct useful research for farmers. Sufficient capacity needs to be developed to meet the needs of farmers in different geographical areas which are in different livelihood zones.</p> <p>There are some potential research facilities and/or locations in the country. In the 1970s adaptive research was conducted at the Yambio Agricultural Research Centre (Greenbelt zone), but in the late 1980's, these activities halted due to the war, which lasted from 1987 until 2004. Many facilities were destroyed. On the other hand, in Halima, near Wau, (Ironstone Plateau zone) an agricultural research centre was planned. Some construction was done but due to limited budget and human resources it was not completed. In addition to these 2 locations, the possibility of establishing a new research centre jointly located at Malakal and Renk (Eastern Flood plain livelihood zone) will be examined. 2 locations are required due to the shortage of suitable land in Malakal for research into large scale mechanised farming. A satellite research office in Renk would be established to conduct research about large scale mechanised farming. A detailed plan will be developed and implemented for rehabilitating existing facilities and constructing new facilities where necessary</p> <p>There are additional livelihood zones with their own characteristics, such as Western Flood Plain, Nile Sobat, and Pastoral. These 3 livelihood zones also need research centres which focus on research activities based on their needs and characteristics. Later in the project, construction of new facilities there will be planned and implemented.</p>
(2) Objectives:	<p>This project aims to enhance functions of agricultural research of the government of South Sudan through strengthening and establishing research centres so as to improve the food security situation.</p>
(3) Overall description including temporal and spatial extent of project:	<p>This project will cover all livelihood zones, however, livelihood zones, such as the Greenbelt, Eastern Flood Plain, Ironstone Plateau, and Hills and Mountains, are given first priority. This project will refurbish the existing research centres and establish new research centres in order to cover different needs of farmers in different livelihood zones. At the same time, the size of the project needs to be realistic and manageable based on the current capacity of the existing research centres, as well as the available government budget for maintenance of the research centres after the project.</p>

Items	Information
(4) Component and activity structure:	<p>As a first priority, the project will assess the physical capacity of the 2 existing research centres at YARC and PBSC in the Greenbelt, and Hills and Mountains livelihood zones. It will also analyse the technological needs of farmers in these livelihood zones. Detailed planning and implementation, including construction will take place in the first 2 years of the project.</p> <p>In the following three years, the project will assessing the possibilities of rehabilitating existing facilities including the Halima Research Centre, and former Yambio Institute of Agricultural Research Centre and developing a new research centre jointly located in Malakal and Renk. It will also analyse the technological needs of farmers in these livelihood zones. Rehabilitation of existing facilities and/or constructing new buildings will be carried out.</p> <p>In the final 5 years, 3 locations will be selected in the remaining 3 livelihood zones, where currently there are no research centres. New research facilities will be constructed in these locations.</p> <p>Component 1: Strengthen the functions of the Yei Agricultural Research Centre (YARC), (Greenbelt) and the Palotaka Basic Seed Centre (PBSC), (Hills and Mountains)</p> <p>Component 2: Rehabilitate and/or construct research centres with essential equipment in Wau (Ironstone Plateau), Yambio (Greenbelt), Malakal and Renk (Eastern Flood Plain)</p> <p>Component 3: Establish new research centres in the remaining 3 livelihood zones, Aweil (Western Flood Plain), Kaopeta (Pastoral), and Bor (Nile Sobat) with essential equipment.</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Strengthen the functions of Yei Agricultural Research Centre (YARC), (Greenbelt) and the Palotaka Basic Seed Centre (PBSC), (Hills and Mountains)</p> <p>Activity 1.1: Assess current situation of YARC and PBSC and farmers needs Outputs: Report on farmers' needs; impact of research by YARC and PBSC in the Greenbelt and Hills and Mountains Livelihood zones; gaps between research activities and farmers' needs</p> <p>Activity 1.2: Visit YARC and PBSC to identify infrastructure, available equipment, and vehicles, past achievements, available human resources, current research goals, institutional strategies to achieve their goals, and the potential of each centre Outputs: Situation analysis report about YARC and PBSC</p> <p>Activity 1.3: Identify institutional strategies to achieve research goals through strengthening facilities of YARC and PBSC through discussions with Director General and other core staff of the Directorate of Research of MAFCRD, and representatives of YARC and PBSC Outputs: Plan to achieve research goals and to improve functions of YARC and PBSC</p> <p>Activity 1.4: Develop construction plans including Environmental Impact Assessment (EIA) and procurement plans for research equipment and furniture for YARC and PBSC Outputs: Construction and procurement plans for YARC and PBSC, EIA reports Agricultural training centres will also be constructed on the same compound and/or same piece of land to strengthen relationships between research and training. For PBSC sufficient land needs to be secured to construct a training centre on the same site. YARC does not need to construct a training centre as CTC Yei is already located next to YARC.</p> <p>Activity 1.5: Rehabilitate and/or construct new facilities to enhance research capacity of YARC and PBSC Outputs: Research centres (YARC and PBSC) housed in suitable buildings</p> <p>Activity 1.6: Procure and provide required equipment and furniture to YARC and PBSC Outputs: Properly equipped research centres</p> <p>Component 2: Rehabilitate and/or construct research centres with essential equipment in Wau (Ironstone Plateau), Yambio (Greenbelt), Malakal and Renk (Eastern Flood Plain)</p> <p>Activity 2.1: Collect and analyse the technological needs of farmers and the impact of agricultural research activities Outputs: Needs assessment of agricultural research in the above 4 towns and their livelihood zones (For the case of Greenbelt livelihood zone, there is already one research centre in Yei, but there is a need to research about crops, vegetables and fruits in a tropical climate with more land. YARC is not spacious enough and there is land available to establish a new one in the Yambio area. There would be two research centres in Greenbelt livelihood zone.)</p> <p>Activity 2.2: Visit Halima Research Centre, former Yambio Agricultural Research Centre,</p>

Items	Information
	<p>Malakal and Renk to analyse possibilities of rehabilitating existing facilities and/or constructing new buildings for research centres</p> <p>Outputs: Reports about available government facilities and potential sites to construct new buildings for research centres in Wau, Yambio, Malakal and /or Renk. (For the the case of Eastern Flood plain livelihood zone, Malakal is a potential location to establish a new research centre, but there is also a need for research into large scale mechanised farming in the area. There is insufficient land to do that research activity in Malakal. A satellite research office in Renk would be established to conduct research about large scale mechanised farming; in Renk there is sufficient land.)</p> <p>Activity 2.3: Identify strategies to improve agricultural research in these 3 livelihood zones through discussion with Director General of the Directorate of Research and other core staff</p> <p>Outputs: Plan to establish research centres in these 3 livelihood zones</p> <p>Activity 2.4: Determine construction sites and size of land, develop construction/refurbishment plans including environmental impact assessment (EIA) and procurement plans for research equipment and furniture at each research centre</p> <p>Outputs: EIA reports about target sites, developed construction/refurbishment plans and procurement plans for equipment and furniture. Agricultural training centres will also be constructed on the same compound and/or same land so as to strengthen the relationship between research and training functions (but not at the satellite office in Renk). When the project team seeks and negotiates with local government authorities and/or land owners for sites for research centres, sufficient land to construct facilities for both research centres and training centres needs to be secured. Construction of facilities for training centres will be made under the "Establishment of training institution infrastructure" project.)</p> <p>Activity 2.5: Rehabilitate and/or construct buildings for new research centres</p> <p>Outputs: Facilities for new research centres at Wau, Yambio, Malakal and Renk</p> <p>Activity 2.6: Procure and provide necessary equipment and furniture to new research Centres</p> <p>Outputs: Properly equipped research centres</p> <p>Component 3: Establishing new research centres in the remaining 3 livelihood zones, Aweil (Western Flood Plain), Kaopeta (Pastoral), and Bor (Nile Sobat) with essential equipment.</p> <p>Activity 3.1: Collect and analyse the technological needs of farmers and the impact of agricultural research activities; assess possibilities of rehabilitating existing facilities or constructing new buildings for research centres in Aweil (Western Flood Plain), Kaopeta (Pastoral), and Bor (Nile Sobat)</p> <p>Outputs: Needs assessment of agricultural research in these livelihood zones; information about available government facilities and potential sites to construct new buildings for research centres in the above 3 livelihood zones</p> <p>Activity 3.2: Identify strategies to improve agricultural research for these 3 livelihood zones through discussion with Director General of the Directorate of Research and other core staff</p> <p>Outputs: Plan to establish research centres in these 3 livelihood zones</p> <p>Activity 3.3: Determine construction sites, develop construction/refurbishment plans including environmental impact assessment (EIA) and procurement plans for research equipment and furniture at each research centre</p> <p>Outputs: EIA reports about the target sites, developed construction plan and procurement plan for equipment and furniture</p> <p>Activity 3.4: Rehabilitate and/or construct buildings for new research centres</p> <p>Outputs: Facilities for new research centres at Aweil, Bor, and Kapoeta</p> <p>Activity 3.5: Procure and provide necessary equipment and furniture to new research centres</p> <p>Outputs: Properly equipped research centres</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:

(2) Description of beneficiaries within the framework of the project:

<p>Directorate of Research of MAFCRD, state Ministries of Agriculture</p>
<ul style="list-style-type: none"> • Direct beneficiaries of Component 1 will be government researchers and concerned staff of the Yei Agricultural Research Centre and the Palotaka Basic Seed Centre. • Direct beneficiaries of Component 2 will be government researchers and concerned staff of the Halima Agricultural Research Centre in Wau and new research centres in Yambio, Malakal, and Renk. • Direct beneficiaries of Component 3 will be government researchers and concerned staff of newly research centres in Aweil, Bor, and Kapoeta. • Other direct beneficiaries will be staff of Directorate of Research at MAFCRD. Indirect

Items	Information										
	beneficiaries will be state Ministries of Agriculture and farmers in all the states.										
2.4 Outcomes, impact and contributions to value added (i.e. economic growth)											
(1) Outcomes and impact:	Through strengthening the existing research centres' infrastructure and establishing new research centres, more applicable agricultural technology for different climates will be researched by about 60 researchers. Then, productivity of farmers in different areas will be improved leading to an increase in profits for farmers.										
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable) Conduct of EIRR would be meaningful since the project is expected to be implemented nationwide and the expected required funds are large.										
2.5 Environmental and social impact, and mitigation measures											
(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: c</td> <td>Project:</td> </tr> <tr> <td>Positive: d</td> <td>a: is likely to have minimal or little impact on the environment and/or society</td> </tr> <tr> <td></td> <td>b: may have an impact on the environment and/or society</td> </tr> <tr> <td></td> <td>c: is likely to have a significant impact on the environment and/or society</td> </tr> <tr> <td></td> <td>d: will have a significant impact on the environment and/or society</td> </tr> </table>	Negative: c	Project:	Positive: d	a: is likely to have minimal or little impact on the environment and/or society		b: may have an impact on the environment and/or society		c: is likely to have a significant impact on the environment and/or society		d: will have a significant impact on the environment and/or society
Negative: c	Project:										
Positive: d	a: is likely to have minimal or little impact on the environment and/or society										
	b: may have an impact on the environment and/or society										
	c: is likely to have a significant impact on the environment and/or society										
	d: will have a significant impact on the environment and/or society										
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> Component 1 will have minimal impact since the two research centres already exist and additional small scale construction should not negatively affect the surrounding environment. Components 2 and 3 would cause larger negative environmental impacts because many new buildings will be constructed with large experimental plots. Land clearance may be necessary in some sites. EIAs will be conducted and consultative meetings held with surrounding communities at each site. Environmental guidelines also need to be developed. <p>(Positive)</p> <ul style="list-style-type: none"> Positive social impacts derived from the project outputs are expected, if there are research centres in each state. New research findings corresponding with the climate conditions of each state such as appropriate seeds, disease resistance varieties, earlier maturity varieties, appropriate manner to apply fertiliser, soil control techniques, etc. could be disseminated and used by farmers. New technologies and knowledge found by research centres will benefit farmers allowing them to farm more effectively. 										
2.6 Monitoring and evaluation for impact measurement											
(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> Number of functioning research centres Number of researchers working at the existing research centres Quantity of functioning and utilized research equipment 										
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> 8 functioning research centres and 1 satellite research office 50 researchers working at the all research centres (Expected) Number of research themes to be covered by all the research centres Quantity of functioning and utilized research equipment Number of research activities implemented by each centre Number of research findings by each centre 										
(3) Methods of measurement and sources of information:	Periodic report written by all the research centres, follow up surveys about impact on extension workers, and farmers, reports about research findings, project reports										
(4) Responsible parties for the monitoring and evaluation:	Directorate of Research of MAFCRD and State Ministry of Agriculture										
2.7 Required human resources											
(1) Principle of human resources management:	A large number of researchers who are working at the Directorate of Research in the MAFCRD should be appropriately assigned to the existing research centres and newly established research centres.										
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> Project manager (one senior staff) Project staff at national level (3 staff, two with agricultural research background and one with agronomy background, experience in rural areas desirable in all the positions) for project management, interviews, detailed design, procurement, logistics, monitoring, etc. 										
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Consultants in the field of:</p> <ul style="list-style-type: none"> Project management (Masters degree, 15-years experience): One Agronomy (Masters degree or more, 10-years experience or more): One Plant bleeding and/or plant pathology (Masters degree or more, 10-years experience or more): One Agricultural mechanisation (Masters degree or more, 10-years experience or more): One Social and environmental considerations (BSc or BA, 5-years experience or more): One Project coordinator (BSc or BA, 2-years experience): One 										
2.8 Risk assessment with respect to project objectives and resources to be applied											
(1) Expected level of risk:	H L: Low M: Medium H: High (select an indicator from the list)										
(2) Explanation of expected risks:	The following risks should be considered.										

Items	Information
	<ul style="list-style-type: none"> • Possibly difficult to find appropriate land and/or available existing facilities • Difficulties of finding reliable construction companies in a timely manner due to limited availability • Difficulties of securing government budget to operate research centres after inauguration • Insecurity and conflicts at some target sites and survey sites • Unfavourable road conditions for construction and procurement of equipment and furniture • High inflation of construction materials and wages of construction workers • Possibly difficult to find and maintain sufficient numbers of qualified researchers for each centre

2.9 Other special considerations and/or notes

<p>(1) Other special considerations and/or notes:</p>	<p>Selection of appropriate sites for rehabilitation and/or constructing new research centres will be critical to conduct meaningful research activities in different livelihood zones. The selection process needs to be done based on clear criteria and government strategies which will be the most beneficial for farmers. Types, number and size of facilities to be constructed should be realistic and manageable by the government in the long term.</p>
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2.10 Routine operation and required resources after the completion of the project

<p>(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.</p>	<p>Periodic monitoring on how each research centre is operating including their research findings needs to be carried out. Monitoring could be conducted with the research capacity development project and it should be conducted by the Directorate of Research of MAFCRD. It would be ideal to monitor with state ministry staff.</p>
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01.23 Development of research institution infrastructure project (cont.)

Project duration	SSP/USD = 4											Total																	
	Phase 1		Phase 2		Phase 3		Phase 4			% to																			
Cost group	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000	% to total		
3 Vehicles for 3 new centres																										450	113	1%	
7 Procurement of equipment																										5,817	1,454	10%	
1 Lab. equipment for YARC and PBSC					600																					600	150	1%	
2 Office furniture for YARC and PBSC				38																						38	10	0%	
3 ICT equipment for YARC and PBSC				64																						64	16	0%	
4 Generators for 8 sites				20																						160	40	0%	
5 Lab. equipment for 4 sites including Wau					400																					800	200	1%	
6 Office furniture for 4 sites including Wau					38																					77	19	0%	
7 ICT equipment for 4 sites including Wau					120																					240	60	0%	
8 Lab. equipment for 3 new centres																										600	150	1%	
9 Office furniture for 3 new centres																										58	14	0%	
10 ICT equipment for 3 new centres																										180	45	0%	
11 Tractors for 7 sites																										3,000	750	5%	
3 Subsidies, equity and loans																													
1 Provision of cash and/or in-kind subsidies																													
2 Provision of training services to the private sector																													
3 Equity investments																													
4 Provision of loans																													
5 Social assistance/donation (Emergency)																													
Total (SSP '000)																											58,956	14,739	100%
Total (USD '000)																											14,739		
% to total																											100%		

Public sector project
Routine work by government

Private sector project
Routine work by private sector

2.4.24 Development of research capacity project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Crop		
(2) Project name:	Development of research capacity project		
(3) Project ID:	0 1 2 4 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2017/18	Ending FY: 2039/40	Duration (years): 23
(5) Total investment:	SSP 59,371,000	USD 14,843,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		CR.SA2	Public sector institution and management capacity development	Table 2-3
(2) Government organisation:	02	MAF-RE	Directorate of Research	Table 2-6
(3) Activity types:	204	SP-RE	Service delivery/infra. Dev. – Research and experiment	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	X
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>Currently, three types of research activities are conducted at Yei Agricultural Research Centre (YARC) in Central Equatoria state and Palotaka Basic Seeds Centre (PBSC) in Eastern Equatoria state: 1) seed multiplication where seeds are obtained from research centres of foreign countries and/or international research institutions; 2) variety testing, such as validating desirable genotypes of some crops for Greenbelt and Hills and Mountain livelihood zones; 3) testing disease tolerance of some crops. Other agricultural research activities are not conducted at the existing government research centres due to financial constraints. Limited research skills, and research equipment and facilities are also causes of limitation of research activities.</p> <p>In order to improve the quality and variety of agricultural research, activities that give positive impacts to South Sudan's agricultural skills and technologies are necessary. Activities required for agricultural research, such as thermometry, basic weather recording, and soil testing, need to be conducted. Numeracy and basic statistical skills are important for research activities as well. Capacity development for research activities also has to be carried out to improve the quality and range of research activities. Improving facilities and equipment for research centres, including an increase in the number of research centres, will be handled by the "<u>Development of research institution infrastructure</u>" project.</p> <p>Current target crops of the YARC are cassava, maize, upland rice, sorghum, and sweet potatoes. The PBSC mainly focuses on maize, sorghum, rice, cassava, groundnuts, and bananas. Many of their focused crops are similar. Other crops should be prioritized and focused on by different research centres, based on the characteristics of livelihood zones. Also, in the middle to long term, research centres should develop and maintain from basic to certified seeds for the above-mentioned crops, grains, beans, tubers and other crops. Commercialization of the seeds is a seed control goal. Moreover, different types of fruit trees and cash crops, such as mango, avocado, nuts, coffee and tea, need to be targets of research; nurseries of tree seedlings should be kept at the research centres. Palatability of crops and fruits also should be tested as part of research.</p> <p>Moreover, research activities should be conducted on identifying disease resistant and drought resistant crops, post-harvest handling, socio-economic aspects of farming, effective and efficient usage of agricultural machinery etc., taking into account the situation of agriculture in South Sudan. As far as agriculture machinery is concerned, the size of fields cultivated in some regions is large and large scale mechanised agriculture would be appropriate, for example Renk in Upper Nile State. Usage of the most efficient and effective ways should be tested in experimental plots at a selected research centre. The knowledge and skills for these research activities need to be strengthened.</p> <p>Furthermore, several government researchers will be sent either to developed countries or eastern African countries, in order to improve their specialized subject knowledge at the master's level, which will better research quality in South Sudan. Expected areas for opportunities of study abroad are plant health, breeding for different types of crops, agronomy, soil science and microorganisms, agricultural statistics, and agricultural engineering.</p>
(2) Objectives:	<p>This project aims to strengthen the capacity of agricultural research of the government of South Sudan. It will contribute to improvement of the food security situation.</p>
(3) Overall description including temporal and spatial extent of project:	<p>This project will cover all the livelihood zones since the "<u>Development of research institution infrastructure</u>" project plans to establish research centres in each state. The project consists of two components and will be a long term project of 22 years. The 1st component is for examining the current research situation, goal setting, planning for detailed research activities, and planning and starting training for basic research activities. The 2nd component of the project includes human resource deployment, training including on the job, study abroad opportunities, and establishment of a monitoring and evaluation system.</p> <p>In the 1st year of the 1st component, agricultural research policy, goals, strategies and methods, and available and required human resources and budgets, are examined and re-established. The discussions are made based on the CAMP situation analysis, past activities of the existing research centres, needs assessment results of farmer's agricultural technological needs from the "<u>Development of research institution infrastructure</u>" project. Detailed research activities are categorized and set with a goal in a given time frame. Main components of proposed research activities which will be strengthened are described below.</p> <ul style="list-style-type: none"> • Basic research skills and research support activities: thermometry, basic weather recording, soil testing, inventory establishment, etc.

Items	Information
	<ul style="list-style-type: none"> • Pesticide management: safe use of biological control agents and pesticides • Seed management: seed multiplication and avoidance of degeneration, generation of certified seeds • Pest, disease and weed management: Pest and disease diagnosis, identification of disease-resistant crop varieties, identification of weeds and weed control measures • Soil fertility: development of methods for using inorganic fertilizers, identification of rotation methods to improve soil fertility • Mechanisation and large scale farming: testing efficient use of farm machinery, economic modelling of farm performance and profitability of large scale farming • Fruits, nuts, cash crop: Identification of the appropriate varieties of fruits, nuts, coffee, and tea • Climatic impacts: identification of drought resistant varieties and strains • Germplasm: collection and conservation of germplasm for local, national, and international varieties of crops • Socio-economic analysis: identification of the most cost efficient farming, identification of comparative and competitive advantage on agricultural commodities produced in South Sudan • Numerical and statistical skills: Numeracy skills for agriculture, experimental design, and basic statistics • Work culture and skills: maintenance of research equipment, work ethics, communication skills, writing skills, team work skills <p>More detailed research activities and research themes to be strengthened are described in the attachment at the end of this project profile..</p> <p>Also, in the 1st year, detailed plans will be developed to strengthen the functions of the 2 existing research centres and other proposed research centres, including human resource allocations of each research centre based on the newly set research goals, strategies, and available government researchers. Additional human resources for particular research areas in particular locations are clarified. In the second year, areas and subjects for capacity building are defined, and a detailed training plan and materials, including on the job training, are developed. Training sessions will start with basics. A recruitment plan for additional researchers, research assistants, and other required staff will be developed based on the availability of the government budget.</p> <p>In the 2nd component of the project, training sessions on required knowledge and techniques will be continued in one location. When a research centre is refurbished and/or newly constructed, deployment of researchers and research assistants will begin. The project team will support inauguration of new centres and will provide technical support on practicing new research activities. Thus, project activity schedules will be determined based on the progress of constructing research facilities by the “<u>Development of research institution infrastructure</u>” project. These activities will be implemented at all the research centres. The 2nd component is expected to continue for 20 years until the end of the phase 3 of CAMP, because research capacity needs strengthening and monitoring continuously.</p> <p>As a part of the 2nd component, several researchers will be selected from 5 different research areas to be sent to study about their specialised subjects at the master’s programs of foreign universities. After returning from study abroad, these researchers will be assigned to research centres to share the knowledge and techniques that they learnt with their colleagues. They also visit other training centres to instruct other researchers in the same area to improve their knowledge and skills.</p>
(4) Component structure:	<p>Component 1: Examining current research situation, goal setting, planning for detailed research activities and training as well as start of training sessions</p> <p>Component 2: Human resource deployment, provision of training, and provision of opportunities of study abroad</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Examining current research situation, goal setting, planning for detailed research activities and training as well as start of training sessions</p> <p>Activity 1.1: Review existing information about farming practices and research activities conducted by YARC and PBSC as well as their mandates; identify available human resources and budget for the Directorate of Research and the existing research centres</p> <p>Output: Needs assessment on farming practices shared by the “<u>Develop research institution infrastructure</u>” project, past records and reports about research activities conducted by YARC and PBSC, budget sheet and list of available researchers belong to the Directorate of Research of MAFCRD</p> <p>Activity 1.2: Set research goals with detailed research activity plan and capacity development plan for the Directorate of Research of MAFCRD</p> <p>Output: Strategic plan of the Directorate of Research (Some key research activities to</p>

Items	Information
	<p>strengthen are thermometry, gauging rainfall, soil testing, fertilizer experiment, cell culture, creating and maintaining foundation seeds and nursery trees)</p> <p>Activity 1.3: Develop a detailed plan for strengthening functions and management systems, including the human resource plan, and monitoring and evaluation plan of YARC and PBSC, as well as other proposed research centres and implement it, develop collaboration plan with universities</p> <p>Output: Strengthened YARC, PBSC, other new research centres with detailed plans, established collaboration plans between universities and research centres</p> <p>Activity 1.4 Secure budget to hire new researchers and to operate new research centres with the Directorate of Planning and Ministry of Finance</p> <p>Output: Secured budget with required amount</p> <p>Activity 1.5 Recruit new researchers based on the human resource plan</p> <p>Output: Recruited new researchers</p> <p>Activity 1.6: Develop detailed training plan and implement it</p> <p>Output: Training plan with detailed contents for each subject and each training centre and trained researchers</p> <p>Component 2: Human resource deployment, provision of training, and provision of opportunities of study abroad</p> <p>Activity 2.1: Conduct training sessions for researchers</p> <p>Output: Trained researchers</p> <p>Activity 2.2: Deploy researchers to YARC, PBSC, and newly constructed research centres and inaugurate new centres</p> <p>Output: Deployed researchers and inaugurated 8 new training centres</p> <p>Activity 2.3: Conduct on the job training to provide technical support to researchers</p> <p>Output: Improved quality of research activities</p> <p>Activity 2.4: Selected researchers are sent to master's programs at foreign universities based on the plan</p> <p>Output: Improved knowledge about selected research areas with master's degree</p> <p>Activity 2.5: Sharing of newly obtained knowledge by returned researchers from foreign universities</p> <p>Output: Shared knowledge obtained from returned researchers</p> <p>Activity 2.6: Develop and share annual reports about research findings by all the research centres with technical support by the project</p> <p>Output: Annual report on research findings combined with a report from all the research centres</p> <p>Activity 2.7: Conduct monitoring and evaluation on strengthened research capacity and its impact on research activities and findings</p> <p>Output: Monitoring and evaluation report</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	Directorate of Research of MAFCRD, Yei Agricultural Research Centre, Palotaka Basic Seed Centre, State governments of the target areas
(2) Description of beneficiaries within the framework of the project:	Direct beneficiaries will be government researchers of all the research centres. Indirect beneficiaries will be staff of Directorate of Research, MAFCRD. Other indirect beneficiaries will be farmers across the country.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	Improved quality and variety of research activities are conducted as results of the project. It will benefit farmers across the country, either to improve their productivity or profitability.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: b Positive: c</td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: b Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: b Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • Through this project more than 50 researchers are expected to be deployed to 10 research centres across the country. • Agricultural research activities require the use of some chemicals. Volume of waste out of research activities will be increased. Total volume of these may not be significant, but frequent use of some chemicals and disposed wastes may cause negative environmental impacts. • Therefore, environmental guidelines should be developed and used for research activities to minimise environmental impacts due to research activities. <p>(Positive)</p> <ul style="list-style-type: none"> • Positive social impacts derived from the project outcomes are considered significant. 		

Items	Information
	<ul style="list-style-type: none"> • Expansion of research activities with higher quality would certainly bring positive social impacts. • Some research topic may lead to a reduction of negative environmental impacts. Identification of the efficient use of organic pesticides to reduce negative impacts on soil and the development of disease resistant varieties, which reduces use of chemical pesticides, can be considered as examples.

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • Number and types of research activity conducted • Number of functioning research centres • Quantity of effectively used and well maintained research equipment • Number of researchers who received training • Number of reports written about research findings • Number and types of basic seeds kept by the research centres
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • Number of functioning research centres • Number of researchers and research assistants who received training and are deployed • Number and types of research activity conducted • Quantity of effectively used and well maintained research equipment • Number of research findings shared with the public and adopted by farmers • Number of research activities conducted according to the schedules in a strategic plan • Number of reports and published research papers written about research findings • Number and types of identified most efficient varieties of target crops released to farmers after successful trials • Number and types of seeds conserved by the research centres per crop • Number and types of identified disease resistant varieties per crop
(3) Methods of measurement and sources of information:	Annual reports by all the research centres, other reports about research findings, monitoring impact on extension workers and farmers, training records, records about on the job training, monitoring and evaluation report, number of leaflets and periodicals produced, number of reports and/or web-pages by foreign and/or international research institution, other government documents
(4) Responsible parties for the monitoring and evaluation:	Directorate of Research of MAFCRD in collaboration with State Ministry of Agriculture

2.7 Required human resources

(1) Principle of human resources management:	Number of researchers needs to be increased due to the expansion of types of research activities. A human resource plan must be developed according to research needs, and planned deployment of researchers needs to be implemented appropriately. Also researchers who will study abroad should be selected carefully from different specialties.
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> • Project manager (one senior staff) • Project staff at national level (3 staff, two with agricultural research background, ideally one with breeding background, one with plant health background, one with agronomy and/or soil background) for project management, detailed design, provision of training, logistics, monitoring, etc.
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Consultants in the field of:</p> <ul style="list-style-type: none"> • Project management (Masters degree or more, 15-year experience): One • Agronomy for cereals, grains, and legumes (Masters degree or more, 10-years experience or more): One • Agronomy for tubers and vegetables (Masters degree or more, 10-years experience or more): One • Agronomy for fruits, coffee, and tea (Masters degree or more, 5-years experience or more): One • Plant pathology (Masters degree or more, 10-years experience or more): One • Plant breeding (Masters degree or more, 10-years experience or more): One • Soil science (Masters degree or more, 5-years experience): One • Weed science (Masters degree or more, 5-years experience): One • Entomology (Masters degree or more, 5-years experience): One • Agricultural machinery (BSc or more, 10-years experience): One • Market and economic analysis (Master degree or more, 10-years experience or more): One • Data management and communication (BSc or more, 7-years experience or more): One • Training and coordination (BA or more, 3-years experience or more): One

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	M L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	<p>Expected risk level might be medium due to the following reasons.</p> <ul style="list-style-type: none"> • Possibly difficult to find funding sources to implement the infrastructure development project for research centres • Difficult to find appropriate and sufficient size of land and/or existing facilities • Difficult to secure government budget to hire sufficient numbers of new researchers and operate new research centres • Difficulty to find sufficient numbers of qualified researchers and research assistants

Items	Information
	<ul style="list-style-type: none"> • Insecurity and conflicts at some target sites • Increased value of foreign currency while selected researchers study abroad

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:

<ul style="list-style-type: none"> • This project will be greatly affected by implementation of the “<u>Development of research institution infrastructure</u>” project. Thus, timing of starting of this project should be carefully considered, especially if the other project is expected to be implemented later than planned. • Research goals and detailed plans need to be developed according to the capacity of facility size and functions. Thus, the core staff of the Directorate of Research of MAFCRD should be interviewed about the research goals, activities and facility plans and their views incorporated into the construction plan of the research centres. • The research centre in Malakal should have a satellite office with large scale experimental plots. Agricultural machinery is one of the unique research topics that will be conducted at the research centre in Malakal due to the agricultural potential in Upper Nile State. However, enough land is not expected to be available in the Malakal area. Thus, a large scale experimental plot will be developed to conduct research activities about agricultural machinery in Renk.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.

<p>Periodic monitoring on how research activities are implemented and what findings are made at each centre. Monitoring should be conducted on a long term basis. Annual reports should be produced to explain about the research findings by all the research centres. Systematic efforts to share the research findings with extension officers and farmers should be made, once findings are made available to the public. For example, an on-farm research activity could be conducted to implement research findings during the project.</p>

Attachment 1: Research activities and research themes to be strengthened

Terms	Category	Research activities/ Research themes
Short term (1 st 10 years)	Basic research skills and activities	<ul style="list-style-type: none"> Thermometry, gauging rainfall, soil testing, inventory establishment for existing varieties, data base development
	Biological control agents and pesticides	<ul style="list-style-type: none"> Safe use of chemical pesticides Development of disposal procedures for research chemicals
	Seed management	<ul style="list-style-type: none"> Seed multiplication and avoidance of degeneration Generation of seeds from pre-basic/basic to certified levels for cereals and legumes and maintenance of them
	Pest, disease and weed management	<ul style="list-style-type: none"> Pest and disease diagnosis Identification, evaluation and promotion of disease-resistant crop varieties Safe use and management of chemical pesticides and conservation of natural enemies of pests Identification of weeds and weed control measures (e.g. striga)
	Soil fertility	<ul style="list-style-type: none"> Development of improved methods for using inorganic fertilizers Identification of land husbandry methods to improve fertility and soil conservation
	Palatability	<ul style="list-style-type: none"> Palatability testing
	Mechanisation and large scale farming	<ul style="list-style-type: none"> Testing efficient use of farm machinery for large scale farming Economic modelling of farm performance and profitability
	Socio-economic analysis	<ul style="list-style-type: none"> Identification of prices and marketability of different varieties of crops at areas around each research station Identification of the most cost efficient farming by different sizes of farms Socio-economic gender analysis to identify the cost effective and profitable style of farming practice and marketing methods considering women' roles
	Conservation of germplasm	<ul style="list-style-type: none"> Collection and conservation of germplasm for local varieties
	Numerical and statistical skills	<ul style="list-style-type: none"> Numeracy skills for agriculture (crop area measurement, plant population, yield/area, gross and net plot, sprayer calibration, spray volume, active ingredient percentage, volume per unit area calculations, etc). Experimental design (randomisation, replication, plot size, null hypothesis and hypothesis testing etc). Basic statistics including sampling from populations, summary statistics, mean and standard deviation, ANOVA, basic tests, (t test and X²), Introduction to use of statistical software (e.g. Genstat, SPSS etc).
Work culture and skills	<ul style="list-style-type: none"> Maintenance of research equipment, work ethics, communication skills, writing skills, team work skills 	
Terms	Category	<ul style="list-style-type: none"> Research activities/ research theme
Middle term (next 6 years)	Research and operational skills	<ul style="list-style-type: none"> Basic skills for tissue culture
	Seed management	<ul style="list-style-type: none"> Generation and maintenance of pre-basic/basic to certified seeds for tubers Commercialization of seeds for cereals and legumes and maintenance of them
	Pest, disease and weed management	<ul style="list-style-type: none"> Evaluation of economic impact of pests and disease on yield Design, evaluation and promotion of integral pest and crop management strategies Identification, evaluation and promotion of culturally appropriate pest and disease management strategies Identification of new varieties of weeds and weed control measures Development of pest and disease resistance varieties for some key crops
	Soil fertility	<ul style="list-style-type: none"> Development of methods for increasing efficiency of biological nitrogen fixation in leguminous plants Development of measures to prevent replant diseases for key crops
	Fruits, nuts, coffee and tea	<ul style="list-style-type: none"> Grow fruits, nuts, and cash crops such as mango, avocado, nuts, coffee, and tea including maintenance of nurseries
	Mitigation of climatic impacts	<ul style="list-style-type: none"> Identification of drought and flood resistant varieties and strains Use of weather records collected from the previous term for analysis on model change and/or variability
	Palatability	<ul style="list-style-type: none"> Palatability testing
	Mechanisation and large scale farming	<ul style="list-style-type: none"> Design and testing of locally appropriate farm tools and machinery including maintenance methods
	Socio-economic analysis	<ul style="list-style-type: none"> Identification of comparative and competitive advantage on agricultural commodities produced in South Sudan
Conservation of germplasm	<ul style="list-style-type: none"> Collection and conservation of germplasm for all the national varieties Generation and maintenance of pre-basic to certified seeds for tubers Generation of commercial seeds for cereals and legumes and maintenance of them 	
Long term (next 6 years)	Research and operational skills	<ul style="list-style-type: none"> Advanced skills for tissue culture
	Seed management	<ul style="list-style-type: none"> Generation and maintenance of pre-basic/basic seeds to certified seeds for

Terms	Category	Research activities/ Research themes
		cash crops and fruits • Commercialisation of certified seeds for cereals and legumes
	Pest, disease and weed management	• Development of pest and disease resistant varieties for other types of crops • Identification, evaluation and promotion of culturally appropriate pest and disease management strategies • Identification of new varieties of weeds and weed control measures
	Soil fertility	• Identification of methods for cost effective use of organic fertilisers, mulching, minimum tillage, and cultural practices • Identification of measures to prevent replant diseases for other crops
	Fruits, nuts, coffee and tea	• Identification of the most appropriate varieties of fruits, nuts, coffee, and tea for each livelihood zones
	Mechanisation and large scale farming	• Identification of possibilities of more advanced farm tools and machinery including maintenance methods
	Conservation of germplasm	• Collection and conservation of germplasm for common international varieties

01.24 Development of research capacity project (cont.)

SSPI/USD = 4

Project duration	Phase 1												Phase 2				Phase 3				Phase 4				Total							
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000	% to total					
5 Implementation of research, studies and surveys																																
6 Delivery of extension and training services to the private sector																																
7 Operation and maintenance																																
1 Supplies and consumables for office																																
2 Construction of infrastructure and procurement of equipment																																
1 Construction of office buildings																																
2 Construction of research, training and other specialized buildings																																
3 Construction of feeder roads																																
4 Construction of production, market and transportation facilities																																
5 Acquisition of land																																
6 Procurement of vehicles																																
1 Pick up for research work																																
2 Motorbike for research work																																
7 Procurement of equipment																																
1 ICT equipment for centres (laptop)																																
2 ICT equipment for centres (printers)																																
3 ICT equipment for centres (copiers)																																
3 Subsidies, equity and loans																																
1 Provision of cash and/or in-kind subsidies																																
2 Provision of training services to the private sector																																
3 Equity investments																																
4 Provision of loans																																
5 Social assistance/donation (Emergency)																																
Total (SSP '000)	7,637	9,965	7,926	5,362	5,107	1,568	1,750	1,260	1,260	1,260	1,260	1,260	1,260	3,420	1,260	1,260	1,134	1,203	1,134	803	1,134	803	1,134	803	1,134	803	1,134	803	59,371	100%		
Total (USD '000)	1,909	2,491	1,981	1,341	1,277	392	437	315	315	315	315	315	315	855	315	315	283	301	283	201	283	201	283	201	283	201	283	201	14,843			
% to total	13%	17%	13%	9%	9%	3%	3%	2%	2%	2%	2%	2%	2%	6%	2%	2%	2%	2%	2%	1%	2%	1%	2%	1%	2%	1%	2%	1%	100%			

Public sector project
Routine work by government

Private sector project
Routine work by private sector

2.4.25 Extension system reform and efficient service delivery project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector	Crop		
(2) Project name:	Extension system reform and efficient service delivery project		
(3) Project ID:	0 1 . 2 5 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2016/17	Ending FY: 2025/26	Duration (years): 10
(5) Total investment:	SSP 74,426,000	USD 18,607,000	Note: Not including recurrent cost
(6) Name of this file (automatic):	01.08_Q1==Q2==Q3=Q4=_141129_Project profile_Crop_Extension system reform and efficient service delivery project_v 7.docx		

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		CR.SA2	Public sector institution and management capacity development	Table 2-3
(2) Government organisation:	12	MAF-PE	Directorate of Agriculture Production and Extension Services	Table 2-6
(3) Activity types:	203	SP-EX	Service delivery and infrastructure development – Extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	X
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

In South Sudan, agricultural extension services are provided by the government. However, these services are inadequate due to limited human resources, means of transport, equipment, and budget for extension activities. An agricultural extension officer (AEO) is a person who delivers agricultural extension services to farmers. AEOs are supposed to be deployed in payam offices to provide effective extension services. However, AEOs are actually located in state or county offices of the Department of Agriculture. Currently, there are not appropriate offices and residential accommodation for AEOs in the payams.

Central Equatoria State deploys one AEO to some county offices such as Yei River, Morobo, and Lainya counties, but these AEOs are not enough numbers to provide appropriate extension services. Many county offices do not have AEOs because only a limited number of AEOs wish to work in rural areas. There is also limited budget to employ sufficient number of AEOs. According to the CAMP Situation Analysis Report (SAR), the total number of AEOs in South Sudan is 291 which should be sufficient to deliver extension services to all counties.⁸ Also the SAR showed that many AEOs are not active and are deployed in state offices rather than county or payam offices. This prevents delivery of effective and sufficient extension services.

Limited means of transport and activity budget also hampers AEOs' activities. Many AEOs join the field activities of NGO extension workers so as to obtain transport; they then jointly provide extension services with the NGO extension workers.

Apart from AEOs, there are two types of extension workers, both employed by the states, who belong to other departments: 1) Community Development Officer (CDO). CDOs work under the Directorate of Rural Development. CDOs support communities to identify problems, embark on self-help projects and build communal facilities. Their responsibilities include awareness raising about health and sanitation as well as coordination for road construction. 2) Cooperative Officer (CO). COs work in the Directorate of Community Development, which promotes cooperative development in each state. COs support people who wish to establish, register, audit, and supervise management of a cooperative. Target groups are not limited to farmers.

CDOs and COs perform outreach activities, but extension work for agricultural purposes is not their responsibility. Therefore, CDOs and COs, and AEOs work separately, rather than collaboratively. The total number of CDOs is 252 and of COs is 255.⁹ 54% of CDOs were deployed at county offices in 2011 and 28% of COs were deployed at county offices in 2011; the rest were deployed at state offices.¹⁰

It seems that the total numbers of CDOs and COs could provide better coverage, if they were assigned appropriately at the county and payam level. However, their means of transport and activity budgets are limited or even zero. Some CDOs had no activities planned due to lack of budget when the SAR was conducted. CDOs and COs are unable to carry out their duties because of the above situation.

Agricultural extension and other outreach work is implemented with limited resources. Activities service delivery is minimal and inefficient even though there are a total of 798 officers. Hiring more AEOs will not make a difference as long as the current extension system is dysfunctional. Rather, manpower and resources of existing AEOs, CDOs, and COs need to be utilised more effectively and efficiently. If the AEOs, CDOs, and COs were consolidated to provide agricultural extension services, there would be 798 people able to cover more areas.

If AEOs, CDOs, and COs could gain the knowledge and skills required to perform each other's duties (while still belonging to their current Ministries and Directorates), it would be possible to consolidate their services. Appropriate deployment of these three types of officers at county and payam offices will be necessary for better functioning extension services. If any AEOs, CDOs, and COs are inactive or do not wish to be deployed to county or payam offices, they need to be replaced.

⁸ The original number was 285 but this was modified due to new information from Western Bahr el Ghazal and Western Equatoria states. Seconded AEOs to FAO are also counted in total numbers. April- June 2013, CAMP Situation Analysis.

⁹ The Project for Livelihood Improvement in and around Juba for Sustainable Peace and Development, Ten States of South Sudan, July 2011. *Survey on the Situation of Rural Development and Agricultural Extension in Ten States of South Sudan*. Juba. Japan International Cooperation Agency. p.54, p.7.

¹⁰ The Project for Livelihood Improvement in and around Juba for Sustainable Peace and Development, Ten States of South Sudan, July 2011. *Survey on the Situation of Rural Development and Agricultural Extension in Ten States of South Sudan*. Juba. Japan International Cooperation Agency. p.54.

Items	Information
(2) Objectives:	<p>In order to improve and maintain the quality of extension services, monitoring and evaluation will be required, including job performance. Currently, there is no such system.</p> <ul style="list-style-type: none"> • Establishment of a more effective agricultural extension system through consolidating AEOs, CDOs, and COs and their duties. • Deployment of them to appropriate locations (primarily to counties and payams) • Establishment of new monitoring and evaluation system including CDOs and COs.
(3) Overall description including temporal and spatial extent of project:	<p>First, TORs for AEOs, CDOs and COs in terms of agricultural extension will be reviewed and developed. AEOs stationed in county offices will be in charge of supervising and providing technical support to other AEOs, CDOs, and COs in payam offices. Then, a list of current AEOs, CDOs, and COs will be made from payroll lists etc. Their ability and skill levels as well as other detailed information will be gathered. Inactive and non-existent (ghost) officers will be identified and measures developed to replace them. Counties and payams, where extension workers are needed, will be identified.</p> <p>After that, a deployment plan for all active extension officers (including replacement extension officers) will be developed, taking into account necessary skills and knowledge required at each identified location. Some AEOs will be redeployed to new offices based on the plan. Active CDOs and COs could also be redeployed to either county or payam offices. The deployment plan needs to be developed considering the officers' tribes, gender, years of experience, and knowledge and experience level about extension work. Training plans will be made for AEOs, CDOs and COs including not only agricultural extension, but also community and cooperative development. The establishment of training plans and provision of training for AEOs will be implemented by the "<u>Strengthening of extension service delivery project</u>".</p> <p>Budget allocation and execution for extension service delivery will be monitored. A monitoring and evaluation system on agricultural extension activities, including CDOs and COs, will be established. Then, trained CDOs, and COs will be deployed to county and payam offices. Office and residential accommodation will be rented in county and/or payam if not currently available. Necessary equipment and transport will also be procured and distributed for CDOs and COs. Deployment of trained AEOs, and provision of necessary transport and equipment would be done in "<u>Strengthening of extension service delivery project</u>". Existing community based extension workers (CBEWs) will be utilized to provide agricultural extension services at the boma level, but selection and training to CBEWs will be conducted under the "<u>Strengthening of extension service delivery project</u>".</p> <p>Activities related to the establishment of TORs for CDOs and COs, identification of AEOs, CDOs, and COs, planning for deployment, and development of training plans will be carried out in the first 18 months. Monitoring on budget planning and execution will start in the 1st year of the project so as to secure sufficient operational budget for extension work. Training for CDOs and COs will occur from the middle of the 2nd year to the 4th year of the project. Deploying AEOs, CDOs and COs to counties will be the first priority and to payams the second priority. Procurement and provision of transport for CDOs and COs will be carried out from the 2nd year to the 4th year of the project. AEOs, CDOs, and COs will start providing agricultural extension services after training and will be part of the newly established monitoring and evaluation system.</p> <p>Linkages between extension work and research activities will be strengthened. Periodic meetings among researchers at agricultural research centres, state Ministries of Agriculture and MAFCRD need to be held to exchange current information and opinions about agricultural technologies. Periodic meetings with NGOs and private companies such as seed and input companies should be held to strengthen collaboration for extension work.</p>
(4) Component structure:	<p>Component 1: Identification of available numbers of active AEOs, CDOs and COs and development of TORs for AEOs, CDOs and COs</p> <p>Component 2: Training and deployment of AEOs, CDOs and COs</p> <p>Component 3: Provision of agricultural extension services with the reformed system</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1: Identification of available numbers of active AEOs, CDOs and COs and development of TORs for AEOs, CDOs and COs</p> <p>Activity 1.1: Develop TORs for AEOs, CDOs, COs about agricultural extension work with required knowledge and skills</p> <p>Outputs: Newly developed TORs for AEOs, CDOs and COs</p> <p>Activity 1.2: Hold an inter-departmental meeting to reach agreement on proposed new arrangement for agricultural extension work and TORs for AEOs, CDOs and COs</p> <p>Outputs: Agreement on TORs on AEOs, CDOs and COs, and new roles of CDOs and COs (written as an official governmental document)</p> <p>Activity 1.3: Identify active, inactive and non-existent AEOs, CDO, and COs with their</p>
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Items	Information
	<p>background information. Deployment requirements and office availability in the payams will be collected from the county offices</p> <p>Outputs: List of active, inactive and non-existent AEOs, CDOs, and COs with their background information. AEOs may be identified by "<u>Strengthening of extension service delivery project</u>". Suitable payam offices for deployment identified. 79 counties will be visited to learn about the current situation of CDOs and COs.</p> <p>Activity 1.4: Develop a deployment plan for existing active AEOs, CDOs, and COs and recruitment plan to fill vacant positions of AEOs, CDOs, and COs</p> <p>Outputs: Report on filled and vacant positions for AEOs, CDOs, and COs, deployment plan and recruitment plan for AEOs, CDOs, and COs</p> <p>Activity 1.5: Monitor budget allocation and execution to secure sufficient budget for agricultural extension delivery</p> <p>Output: Secured budget for agricultural extension delivery (This activity needs to be coordinated with a related project which might be implemented under the institutional development sub-sector.)</p> <p>Component 2: Training and deployment of AEOs, CDOs and COs</p> <p>Activity 2.1: Eliminate non-existent and inactive AEOs, CDOs, and COs, who decide to leave, from the registration list and the payroll system</p> <p>Outputs: Only active AEOs, CDOs, and COs on the government list of AEOs; number of AEO/CDO/CO positions which need to be filled by recruitment</p> <p>Activity 2.2: Recruit necessary numbers of AEOs, CDOs, and COs</p> <p>Outputs: Full complement of AEOs, CDOs, and COs (Official recruitment processes will be taken by the responsible state Ministries and Directorates.)</p> <p>Activity 2.3: Deploy newly recruited AEOs, CDOs and COs to county and payam offices</p> <p>Outputs: County and payam offices with full complement of trained AEO/CDO/COs (Training for newly recruited AEOs will be provided by the "<u>Strengthening of extension service delivery project</u>" as for other AEOs.</p> <p>Activity 2.4 : Develop a training plan and curriculums for CDOs and COs</p> <p>Outputs: Training plan with schedules and curriculums for CDOs and COs</p> <p>Activity 2.5: Train CDOs and COs according to the agreed requirements</p> <p>Outputs: Trained CDOs and COs knowledgeable about agricultural extension (AEOs will trained by the "<u>Strengthening of extension service delivery project</u>".)</p> <p>Activity 2.6: Procure and provide transport and necessary equipment for agricultural extension work to trained CDOs and COs (Transport and necessary equipment for AEOs will be procured and provided by "<u>Strengthening of extension service delivery project</u>".)</p> <p>Outputs: CDOs and COs with transport, necessary equipment, and materials for agricultural extension</p> <p>Activity 2.7: Rent offices and residential accommodation for AEOs, CDOs, and COs in county and payams as necessary</p> <p>Outputs: Offices and housing for AEOs, CDOs, and COs.</p> <p>Component 3: Provision of agricultural extension services with the reformed system</p> <p>Activity 3.1: Newly trained and equipped AEOs, CDOs, and COs will start providing agricultural extension services</p> <p>Outputs: Better extension services by trained AEOs, CDOs and COs</p> <p>Activity 3.2 : Assess current routine monitoring and evaluation (M & E) system and activities on agricultural extension work</p> <p>Outputs: Knowledge of routine M & E system and current situation and challenges</p> <p>Activity 3.3: Develop a detailed plan how CDOs and COs could be integrated into the current M & E system</p> <p>Outputs: Monitoring and evaluation system for agricultural extension work (CDOs and COs in payams will be obliged to report their activities to AEOs at the county level; those at county level will need to report to the state Ministry of Agriculture as AEOs currently do. Regular field visits to bomas to support and monitor community based extension workers' (CBEW) activities will also be the responsibility of AEOs, CDOs and COs in payams. CDOs and COs will need to participate in county wide meetings with AEOs and CBEWs 4 times a year in addition to state wide meetings with AEOs twice a year to report and consult on their activities. If AEOs, CDOs and COs do not perform their duties related to agricultural extension work, there will be follow up by their supervisors.)</p> <p>Activity 3.4: Implement a new M & E system and review its use</p> <p>Outputs: Improved monitoring and evaluation system</p> <p>Activity 3.5: Provide in-service training for CDOs and COs to update agricultural extension knowledge and skills every 3 years</p> <p>Outputs: CDOs and COs with updated knowledge and skills about agricultural extension (In-service training on AEOs will be provided by "<u>Strengthening of extension service delivery project</u>".)</p> <p>Activity 3.6: Provide induction training to newly recruited CDOs and COs</p>

Items	Information
	<p>(Every year, some CDOs and COs may retire. Thus, induction training is provided every year in each state. Induction training for new AEOs will be provided by “Strengthening of extension service delivery project”.)</p> <p>Outputs: New CDOs and COs with basic knowledge and skills about agricultural extension work</p> <p>Activity 3.7: Hold periodic meetings among representatives from agricultural research centres, state Ministries of Agriculture, Directorate of Research of MAFCRD, and Directorate of Agricultural Production and Extension Services to share updated information about agricultural technologies</p> <p>Outputs: AEOs, CDOs, COs, CBEWs, and farmers with updated information about agricultural technologies</p> <p>Activity 3.8: Hold periodic meetings among state Ministries of Agriculture, NGOs and private companies to share activity information and opinions about extension work</p> <p>Outputs: Better coordinated extension services as different actors share information</p> <p>Activity 3.9: Establish maintenance system of motorcycles and equipment for AEOs, CDOs, and COs</p> <p>Outputs: Maintained motorcycle and equipment (Only approved repair shops will provide repair services for motorcycles at the project’s expense. Broken equipment could be either replaced and/or repaired depending on its condition. A report must be made to the state office. Budget for this maintenance system needs to be part of the government budget by the end of the project.)</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<p>Directorate of Agriculture Production and Extension Services, Directorate of Rural Development, and Directorate of Cooperative Development in the MAFCRD are main service providers at the national level. Concerned departments related to agricultural extension, community development, and cooperative development in the state, county, and payam governments are key service providers at state, county, and payam levels.</p> <p>Training for CDOs and COs will be provided by training centres in each state.</p>
(2) Description of beneficiaries within the framework of the project:	<p>Primary beneficiaries are AEOs, CDOs, COs to gain new knowledge and skills to fulfil their newly defined TORs. Secondary beneficiaries of the project are farmers who receive extension services under the reformed extension system.</p>

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<p>Outputs of this project contribute to improvement of the knowledge and skills of farmers. It would increase farmers’ productivity and yields which should increase their profits. Through the extension system reform, AEOs, CDOs and COs will be able to provide a broad range of services, combining views from agricultural extension, community development, and cooperative development. Thus, positive actions for community development and cooperative development could be expected in the agriculture sector.</p>
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td> <p>Negative: b Positive: d</p> </td> <td> <p>Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society</p> </td> </tr> </table>	<p>Negative: b Positive: d</p>	<p>Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society</p>
<p>Negative: b Positive: d</p>	<p>Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society</p>		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative) This project does not require any construction of buildings. Motorcycles will be provided to CDOs and COs, but these will be maintained well for a long period of time through the maintenance system. The project’s main objective is to reform the extension system and strengthen capacity of human resources such as CDOs and COs. Therefore, negative environmental impacts seem to be limited.</p> <p>(Positive) Positive impacts on farmers because of extension system reform would be significant and large numbers of AEOs, CDOs and COs will start engaging in agricultural extension work in wider areas.</p>		

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • Number of active, inactive and non-existent AEOs • Quantity of available transport to provide agricultural extension services • Amount of budget spent for extension activities for each type of extension officer
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • Number of newly trained and deployed AEOs, CDOs, and COs • Quantity of available transport to provide agricultural extension services • Amount of budget spent for extension activities • Number of farmers received extension services during the project period • Number of records and/or reports for monitoring and evaluation
(3) Methods of measurement and sources of information:	<p>Surveys, checking records of M & E, field visits, and interviews will be the main methods of measurement. Sources of information will be a new list of AEOs, training records,</p>

Items	Information
(4) Responsible parties for the monitoring and evaluation:	deployment records, M & E records, records about delivery of transport and equipment, related government documents, budget plan and execution records Directorate of Agriculture Production and Extension Services, Directorate of Rural Development, and Directorate of Cooperative Development in the MAFCRD Ministry of Agriculture at each state

2.7 Required human resources

(1) Principle of human resources management:	<ul style="list-style-type: none"> Total numbers of AEOs, CDOs, and COs will not be increased, but if there were any elimination from the payroll list, the same numbers of AEOs, CDO, and COs will be recruited. Coordination among different Directorates at MAFCRD is essential to implement this project. At national and state level, information sharing, support and coordination based on official agreement with other Ministries using CDOs and COs will be critical to implement this project successfully. M & E on CDOs and COs needs to be carefully conducted, but will be key to maintain the reformed system.
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> Project manager from MAFCRD (one senior staff from the MAFCRD, Directorate of Agricultural Production and Extension Services, grade 3 or 4) Project staff from MAFCRD (three staff, one staff from the Directorate of Agricultural Production and Extension Services, one staff from Directorate of Rural Development, and one staff from Directorate of Cooperative) for project detailed design, conduct of needs assessment, project implementation and management, procurement, logistics, and monitoring, etc. From each state, Director of Extension and Senior Inspector of Extension, grade 7 and Inspector of Extension, grade 8. These project staff from the state Ministry of Agriculture will work with MAFCRD to implement the project. Directors and key staff of the concerned state ministries about CDOs and COs support project implementation.
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Consultants in the field of:</p> <ul style="list-style-type: none"> Project management (Master's degree, 15-years experience): One Agricultural extension (BA or BSc, 10-years experience or more): One Institutional development (BA, 10-years experience or more): One Education and training (BA, 5-years experience or more): One Project coordinator (BA in Agriculture desirable, 3-years experience or more): One <p>Training for CDOs and COs will be provided by CTC Yei and other government training centres (BA or more in Agricultural discipline, 10-year experience or more for extension and/or training on extension) CTC Yei and other government training centres could use either their permanent teaching staff or hire temporary teaching staff from other organizations.</p>

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk	H	L: Low	M: Medium	H: High	(select an indicator from the list)
(2) Explanation of expected risks:	<ul style="list-style-type: none"> Possibly difficult to obtain cooperative attitudes about adding tasks of agricultural extension work to the workload of CDOs and COs by the concerned Directorates of MAFCRD and Departments in state ministries Elimination of non-active and/or non-existent AEOs, CDOs, and COs from the government payroll may cause strong objections and/or sabotage of project implementation by some people. Difficulties of finding sufficient numbers of active and/or existing AEOs, CDOs, and COs Insecurity and conflicts in rural areas 				

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	<ul style="list-style-type: none"> Full explanations and discussions among the main stakeholders are essential considering the number of government employees to be affected among the three different Directorates. Especially, acceptance and cooperation will be essential from the concerned ministries and directorates at state level. Coordination and information sharing with the "<u>Strengthening of extension service delivery project</u>" is critical for smooth implementation of the project since this project provides training, transport, and equipment for AEOs. Activities related to elimination of non-active and/or non-existent AEOs, CDOs, and COs from the government payroll need to be cautiously implemented with consent of concerned people in various Directorates of MAFCRD and state ministries.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required	Periodic reporting and supervision will be conducted for extension service delivery. Required numbers of AEO/CDO/COs need to be deployed to appropriate locations to county and payam levels. Financial arrangements are also key to provide the salaries of newly deployed AEOs, CDOs, and COs. Budget for procuring transport and necessary equipment, as well as to carry out activities for delivering extension services, needs to be a recurrent cost financed by the government after the completion of the project.
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Items	Information
resources can be done in an indicative manner.	

01.25 Extension system reform and efficient service delivery project (cont.)

SSP/USD = 4

Project duration	Phase 1		Phase 2		Phase 3		Phase 4		Total																					
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000	USD '000	% to total		
6 Procurement of vehicles			3,000	1,050	1,050																						5,100	1,275	7%	
1 Provision of motorbikes for AEOs			3,000																									3,000	750	4%
2 Provision of bicycles for CBEWs				1,050	1,050																							2,100	525	3%
7 Procurement of equipment			120	60	60																							360	90	0%
1 Farm tools and equipment for AEOs			120																									120	60	0%
2 Farm tools and equipment for CBEWs				60	60																							120	30	0%
3 Subsidies, equity and loans																														
1 Provision of cash and/or in-kind subsidies																														
2 Provision of training services to the private sector																														
3 Equity investments																														
4 Provision of loans																														
5 Social assistance/donation (Emergency)																														
Total (SSP '000)			2,649	6,302	9,005	8,895	8,411	7,763	7,823	7,763	7,763	8,049																74,426	18,607	100%
Total (USD '000)			662	1,575	2,251	2,224	2,103	1,941	1,956	1,941	1,941	2,012																		
% to total			4%	8%	12%	12%	11%	10%	11%	10%	10%	11%																		

Public sector project
Routine work by government

Private sector project
Routine work by private sector

2.4.26 Establishment and enhancement of national higher educational institutions for agriculture project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Crop				
(2) Project name:	Establishment and enhancement of national higher educational institutions for agriculture project				
(3) Project ID:	0	1	2	6	01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development
(4) Start and ending fiscal year:	Starting FY: 2020/21	Ending FY: 2029/30	Duration (years): 10		
(5) Total investment:	SSP 37,865,000	USD 9,466,000	Note: Not including recurrent cost		

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		CR.SA2	Public sector institution and management capacity development	Table 2-3
(2) Government organisation:	10	MAF-ET	Directorate of Agricultural Education and Training	Table 2-6
(3) Activity types:	210	SP-SI	Service delivery/infra. dev.- Social infrastructure development	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	X
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	
	81	WA	Warrap State	
	82	NB	Northern Bahr el Ghazal State	
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	X

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>There is a strong demand for higher education in agriculture in South Sudan. For example, the University of Juba has a College of Natural Resources and Environmental Studies. In that College, 4 departments are available: Agricultural Science, Animal Production, Forestry and Fisheries. All the departments require 5 years to complete the undergraduate programmes. In 2013, 172 students registered to study Agricultural Science, 139 for Animal Production, 106 for Forestry, and 73 for Fisheries. In total there are 490 students studying agriculture at the University of Juba to complete their bachelor's degree. There are assumed to be a similar number of students studying agriculture at other universities. This information shows the high demand to study agriculture in the country.</p> <p>In South Sudan, there are four universities offering courses related to the crop subsector: the University of Juba, Upper Nile University, John Garang Memorial University, and the Catholic University of South Sudan. Classes offered vary with university, but all lead to a bachelor's degree in agriculture. The University of Juba and Upper Nile University also offer courses for the livestock, forestry, and fisheries subsectors. Western Bahr el Ghazal University also teaches livestock courses. Having these universities in different states is advantageous for students residing in different areas.</p> <p>However, there are many challenges that hamper these universities. For example, courses are composed mainly of theoretical classes. This is due to lack of land for practice and experiment in agriculture on campus. There is no post graduate student study at the University of Juba except for the Department of Fisheries. This is because teaching staff and facilities are limited to be able to offer post-graduate courses. Funding sources are government subsidies, DPs' support, and students' tuition and these are not enough to expand and/or improve the quality of courses. The situation is similar at different universities. There is no collaboration among the universities and private and government training centres in South Sudan to enhance opportunities for field practices and laboratory experiments.</p> <p>Moreover, geographically speaking, establishing a new higher education institute in the Greenbelt offering classes and courses different to the existing universities, would increase opportunities to prospective students for higher education in the agricultural sector. In the past, there was a higher education institute called "Yambio Institute of Agriculture" in Western Equatoria State. It used to be the only agricultural educational institution in the southern part of Sudan until the 1970s. Unfortunately, it was destroyed during the war, but it played an important role in teaching agriculture to the older generation. There is enough land available on the former site of the Yambio Institute of Agriculture, which has the potential to be reconstructed as a higher agricultural education institute strong in tropical agriculture. The newly established agricultural higher education institute will fall under the jurisdiction of MAFCRD. It will offer accredited university level qualifications (bachelor's degrees and diplomas).</p>
(2) Objectives:	Main objective of the project is to enhance the variety and quality of available classes at higher education institutes in agriculture.
(3) Overall description including temporal and spatial extent of project:	<p>The project has two components. One is strengthening the existing universities and the other is re-establishment of a new higher education institute (university level) where the former Yambio Institute of Agriculture is located.</p> <p>The first component is planned to be implemented in the first 4 years. The early activities will target the improvement of teaching staff, teaching facilities, and equipment so as to increase available courses and improve the quality of classes. Demands and requirements to establish post-graduate courses at Juba University will be identified. Support from existing training centres and educational institutions will be acquired in order to offer students practical experience in their courses.</p> <p>To improve the financial situation, budget and expenditures will be examined and potential fund sources investigated. To find the precise needs of all universities' agriculture departments, interviews and site visits will be conducted. Plans for strengthening each university will be developed based on this, plus discussions with the Directorate of Agricultural Education and Training, as well as university staff. The University of Juba will be the first target to be strengthened and other universities will follow, but some activities may be implemented simultaneously. Impacts of these activities will be assessed within the project time-period.</p> <p>The second component will be implemented in the second 6 years. Site visits and interviews will be made to assess the current situation. As in earlier activities, vision, mission, values, and required knowledge and skills, which are not available at existing universities, will be discussed with the director and staff of the Directorate of Agricultural</p>

Items	Information
(4) Component structure:	<p>Education and Training. These discussions will also examine the concept to re-establish an agriculture specialized higher education institute at Yambio, given its geographical advantage. Facility plans, course contents, required staff, required budget, collaboration systems with other educational and research institutions will be developed. The accreditation process, as a university, with the Ministry of Higher Education and budget negotiation with the Ministry of Finance will be initiated during the planning phase. These activities need to be done in the first two years. Construction is arranged and implemented in the third year and fourth year. During construction, all course materials are developed. After the completion of construction, required staff are assigned to the institute and students for the first year will be recruited from across the country.</p> <p>Component 1: Strengthening the existing universities Component 2: Re-establishment of a new higher education institute where former Yambio Institute of Agriculture is located</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Strengthening the existing universities</p> <p>Activity 1.1: Identify needs of each university to improve their educational services and to establish post graduate courses, through interviews and site visits Output: Needs assessment report</p> <p>Activity 1.2: Develop strategies and a detailed plan for strengthening functions of these universities including teaching standards Output: Strategies and detailed plans including information about teaching quality, improvement of curriculums and class contents, and equipment to increase available courses and improve quality of classes for each university</p> <p>Activity 1.3: Decide details about post graduate courses for Juba University Output: Detailed plan includes objective, curriculum, class contents, requirements, timeline, necessary annual budget, necessary professors for post graduate courses</p> <p>Activity 1.4: Seek and secure new source of funds to establish and maintain post graduate courses at Juba university Output: Secure source of funds and clarify amounts</p> <p>Activity 1.5: Develop a plan with the existing training centres, other educational institutions, and agricultural research centres on how to collaborate, especially for creating opportunities for field practice and laboratory experiment Output: More field practices and laboratory experiments are available through collaboration with other educational and research institutions such as the establishment of an intern system to gain field practice and/or laboratory experience.</p> <p>Activity 1.6: Procure necessary equipment to conduct field practice and laboratory experiments with support from other educational and research institutions Output: Procured essential equipment</p> <p>Activity 1.7: Recruit new teachers for post graduate courses Output: 4 new professors for post graduate program</p> <p>Activity 1.8: Prepare to start new programs at all the universities</p> <p>Activity 1.9: Monitor and evaluate quality of classes and activities at strengthened universities and provide technical support to each university to improve teaching quality according to the strategies and detailed plans made (Monitor selected classes of different departments and hold a session with each faculty member teaching agriculture related subjects to provide technical support for improvement of teaching quality including contents and materials.) Outputs: Monitoring reports and improved teaching quality of each faculty member at five universities</p> <p>Component 2: Re-establishment of a new higher education institute where the former Yambio Institute of Agriculture was located</p> <p>Activity 2.1: Conduct needs assessment to establish a new agricultural higher education institute Output: Needs assessment report</p> <p>Activity 2.2: Discuss and develop strategies and detailed plans to establish a new higher education institute with the staff of the Directorate of Agricultural Education and Training of MAFCRD and MLFI Output: Strategies, detailed implementation plan, vision, mission, values, facility plans, curriculum, staff, equipment, budget for a new higher education institute</p> <p>Activity 2.3: Seek and secure budget Output: Secured funding source and sufficient amount for operational budget</p> <p>Activity 2.4: Implement activities for accreditation of the new institute as a university level educational institution with the Ministry of Higher Education Output: Completed accreditation process as a higher education institute</p> <p>Activity 2.5: Arrange and implement construction Output: Constructed buildings and facilities</p> <p>Activity 2.6: Recruit required staff</p>
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Items	Information
	<p>Output: Newly employed staff start work at the new institute</p> <p>Activity 2.7: Train newly employed teaching staff</p> <p>Output: Standardized quality of teaching</p> <p>Activity 2.8: Procure necessary equipment, furniture and office equipment</p> <p>Output: Procured equipment for field practice and laboratory experiment, furniture, and office equipment</p> <p>Activity 2.9: Develop collaboration methods and strategies with other existing universities, training centres and research centres</p> <p>Output: Collaboration plan with other universities, educational and research institutions</p> <p>Activity 2.10: Recruit students for the first year</p> <p>Output: Students studying at the institute</p> <p>Activity 2.11: Monitor and evaluate quality of education and operation of the institute</p> <p>Output: Monitoring reports</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	Universities which offer agriculture related courses are the main implementing institutions for this project. Directorate of Agricultural Education and Training of MAFCRD provides technical support. Operational budget is provided by MAFCRD and students' tuitions are expected to cover about 30% of operation costs for the universities. CTC Yei, Kagelu Forestry Training Centre, Marial Lou Livestock Training Centre, Padak Fisheries Training Centre, AMADI Rural Development Institute, and Yei Agricultural Training Centre will collaborate with each university and the newly established higher education institute to provide opportunities for field practices and laboratory experiments.
(2) Description of beneficiaries within the framework of the project:	Universities which offer agriculture related courses, staff of newly established higher education institute for agriculture, university students, students for the newly established institute, above mentioned training centres and institutes, concerned officials of MAFCRD

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<ul style="list-style-type: none"> • Strengthened existing universities • Established new agricultural higher education institute • Improved varieties and quality of higher agricultural education • Established post graduate courses at Juba University • Increased numbers of the students who study agriculture • More effective and efficient agricultural practice in the country in the long term
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td style="vertical-align: top;"> Negative: b Positive: c </td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: b Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: b Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • Constructing new buildings for establishing a higher education institute will leave some negative environmental impacts in Yambio. For example, after starting the university courses, staff and students would use the facilities and water consumed from dormitories and laboratories could impact the environment negatively. • Excrements from livestock and poultry would cause negative environmental impacts. Some clarification of land use (land tenure, clearing of trees etc.) might be necessary to construct the required facilities. Therefore, development guidelines to minimize environmental impacts are suggested. Excrements from livestock and poultry could be utilized to make manure to minimize negative environmental impacts. <p>(Positive)</p> <ul style="list-style-type: none"> • Strengthening the functions and quality of university classes at existing universities and the creation of educational opportunities at the newly established institute will create positive impacts for society in the long term. 		

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • Number and titles of available classes related to agriculture at each university • Number of teaching staff for agriculture subjects at each university • Availability of field experiences for agricultural courses • Amount of budget and number of funding sources for Departments of Agriculture at each university • Quantity of available equipment and facilities
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • Number and titles of available classes related to agriculture at each university and the new higher education institute • Number of teaching staff for agriculture subjects at each university and the new higher education institute • Availability of field experiences for agricultural courses

Items	Information				
	<ul style="list-style-type: none"> • Amount of budget and number of funding sources for Departments of Agriculture at each university and the new higher education institute • Number of students at each university • Quantity of available equipment and facilities • Number and types of collaborative relationships with existing training centres/institutes • Number of students who find employment opportunities after graduation and types of their employment opportunities 				
(3) Methods of measurement and sources of information:	Records of universities, records of newly established higher education institute, project reports government documents				
(4) Responsible parties for the monitoring and evaluation:	Directorate of Agricultural Education and Training of MAFCRD				
2.7 Required human resources					
(1) Principle of human resources management:	<p>People in charge of this project need to have flexibility to listen to opinions of university staff and other stakeholders.</p> <p>University staff involved in the implementation of this project , teaching staff at universities and at the new higher education institute must buy in to this project.</p>				
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> • Project manager (one senior staff) • Project staff (five covering the following specialities: agronomy, forestry, animal husbandry, fisheries, agricultural education/training) for project detailed design, project implementation and management, procurement, logistics, and monitoring, etc. <p>At least one of the above staff members should be selected from the Directorate of Agricultural Education and Training of MAFCRD</p>				
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Consultants in the field of:</p> <ul style="list-style-type: none"> • Project management (Master's degree, 15-years experience): One • Agronomy (BSc or BA, 10-years experience or more): One • Animal husbandry (BSc or BA, 10-years experience or more): One • Forestry (BSc or BA, 10-years experience or more): One • Fisheries (BSc or BA, 10-years experience or more): One • Education and training (BA, 10-years experience or more): One • Project coordinator (BA in Education or Agriculture, 3-years experience or more): One 				
2.8 Risk assessment with respect to project objectives and resources to be applied					
(1) Expected level of risk:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; text-align: center;">H</td> <td style="width: 25%; text-align: center;">L: Low</td> <td style="width: 25%; text-align: center;">M: Medium</td> <td style="width: 25%; text-align: center;">H: High</td> </tr> </table> <p style="text-align: right;">(select an indicator from the list)</p>	H	L: Low	M: Medium	H: High
H	L: Low	M: Medium	H: High		
(2) Explanation of expected risks:	<p>The following risks should be considered.</p> <ul style="list-style-type: none"> • Difficult to find appropriate construction companies in a timely manner • Difficulties of securing government funding to operate the newly established agricultural higher education institute • Difficulties of finding qualified teaching staff • Difficulties of finding and maintaining funding sources to strengthen the existing universities • Difficult to obtain accreditation for the newly established higher education institute in Yambio from the Ministry of Higher Education, Science and Technology • Insecurity and conflicts at target sites and interview sites • Unfavourable road conditions to implement the project 				
2.9 Other special considerations and/or notes					
(1) Other special considerations and/or notes:	Sustainability of funds for all the universities and attempts for diversification of funding sources need to be constantly considered. Financial management of the newly established education institute needs to be sustainable. Recruiting qualified teaching staff is also critical to raise and/or maintain the quality of education at universities and the newly established higher education institute.				
2.10 Routine operation and required resources after the completion of the project					
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	Periodic monitoring on how university courses are operated should be conducted by the Directorate of Agricultural Education and Training of MAFCRD jointly with staff of the monitored education entities. Financial sources need to be stabilized and the amount of tuition fees needs to be increased to support the universities and the new education institute's activities and operation. Number of students graduated from the universities should be monitored by Departments to ensure quality of degrees.				

01.26 Establishment and enhancement of national higher educational institutions for agriculture project (cont.)

Project duration	SSP/USD = 4																													
	Phase 1			Phase 2			Phase 3			Phase 4			Total																	
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000	% to total			
6 Procurement of vehicles						300																					300	75	1%	
1 Pick up for new institution						300																						300	75	1%
7 Procurement of equipment																												625	156	2%
1 20 laboratory equipment for 4 universities																												160	40	0%
2 50 equipment for field practice for 4 universities																												80	20	0%
3 30 laboratory equipment for new institutions																												60	15	0%
4 50 equipment for field practice for new institutions																												20	5	0%
5 300 desks & chairs																												45	11	0%
6 ICT equipment																												220	55	1%
7 Generators																												40	10	0%
3 Subsidies, equity and loans																														
1 Provision of cash and/or in-kind subsidies																														
2 Provision of training services to the private sector																														
3 Equity investments																														
4 Provision of loans																														
5 Social assistance/donation (Emergency)																														
T total (SSP '000)						4,230	3,491	2,959	2,871	11,429	10,409	1,236	818	211	211													37,865	100%	
T total (USD '000)						1,057	873	740	718	2,857	2,602	309	205	53	53													9,466	100%	
% to total						11%	9%	8%	8%	30%	27%	3%	2%	1%	1%															

Public sector project
Routine work by government

Private sector project
Routine work by private sector

2.4.27 Establishment and enhancement of agricultural vocational institutions project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Crop		
(2) Project name:	Establishment and enhancement of agricultural vocational institutions project		
(3) Project ID:	0 1 2 7 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2020/21	Ending FY: 2029/30	Duration (years): 10
(5) Total investment:	SSP 17,424,000	USD 4,356,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		CR.SA2	Public sector institution and management capacity development	Table 2-3
(2) Government organisation:	10	MAF-ET	Directorate of Agricultural Education and Training	Table 2-6
(3) Activity types:	210	SP-SI	Service delivery/infra. dev.- Social infrastructure development	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	X
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	
	73	UT	Unity State	
	81	WA	Warrap State	
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	
	02	PH2	Phase II (2020/21-2024/25, 5 years)	
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	X
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

The mandate of MAFCRD includes achieving food security at household and regional levels in South Sudan. A primary industry of South Sudan is agriculture and improvement of the agricultural skills of farmers would ameliorate the food security situation. Many subsistence farmers and/or ordinary people, as well as socially vulnerable people, who want to start agriculture, would like to gain practical skills and knowledge about agriculture which they could immediately apply. However, due to their financial difficulties, time limitations, and limited availability of training opportunities, they are unable to easily acquire these skills and knowledge. Many of these people have minimal educational backgrounds and have limited opportunities to learn about agricultural skills in educational and/or training settings. Consequently, improving practical agricultural skills through vocational training would lead to the betterment of the food security situation.

Vocational training has a potential to play an important role for a broad range of people to acquire practical skills. Vocational training centres could provide technical and practical skills which could be immediately used at work. It is more accessible than universities and existing agricultural training centres. Therefore, more varieties of agricultural classes, including shorter courses with lower prices, should be provided through vocational training centres. Target populations of this project are ordinary adults, subsistence farmers, and socially vulnerable people such as refugees, returnees, IDPs, women, youth, and people with disabilities.

Students who wish to study at vocational training centres should be able to pay for tuition and have access to land that they can cultivate because of the nature of vocational training. In the case of returnees, IDPs and refugees, they should have been designated a place to be resettled with suitable land for agriculture. Arrangements may have to be made to assist them pay tuition fees, maybe by NGOs or other donors.

As far as the vocational training is concerned, both the Ministry for Labour, Public Service and Human Resource Development (MLPSHRD) and Ministry of General Education and Instructions (MOGEI) are promoting it. However, MLPSHRD deals with vocational training which provides skills and knowledge immediately usable in the labour market. MOGEI promotes Technical Vocational Education and Training (TVET) which is based on both more formal educational training as well as vocational. Both Ministries recognize that a unified and comprehensive curriculum and approach for vocational training is necessary, but up till now there is no national standardized vocational training curriculum. What is necessary for farmers and people who want to start agriculture is ready-to-use knowledge and skills. Therefore, this project selects vocational training which is more skill driven and that is operated by MLPSHRD, so as to improve the quality and availability of agricultural vocational training.

Currently, there are five vocational training centres in South Sudan under the jurisdiction of MLPSHRD. They are located in Juba, Malakal, Wau, Aweil, and Rumbek. All of the centres teach various classes as well as agriculture related ones, but the contents of these classes vary by centre. The vocational training centre in Rumbek is available only for female students and started operation in 2013. Other vocational training centres are open for male and female students. The objective of these vocational centres is to provide practical skills for ordinary people and socially vulnerable people.

The five vocational training centres are geographically scattered in different locations. There are courses about agriculture that contain not only crop production but also livestock, and agroforestry. These centres offer 3 months, 6 months, and 1 year agricultural training courses. The 3 month training course covers crop production, agroforestry and livestock subjects. The 6 months training course also includes fish farming. Therefore, students can gain a broad range of knowledge about agriculture. However, course contents are not standardized among all the vocational training centres. Therefore, subjects in the course and quality of classes are not standardised but also vary by centre.

Also, vocational training should be offered across the country. In the past, there was a training centre called Nzara Agricultural Technology Training Centre in Western Equatoria State, approximately 20 kms from Yambio; it provided many practical agricultural training classes and was a well-known institution. Geographically speaking, Yambio is an area with strong agricultural potential and thus, establishment of a vocational training centre specialized in agriculture would be beneficial for the area. Vocational training centres need to be located in the proximity of a large town. Thus, Yambio is a suitable location for the large farming population in the region. There is also a plan to establish an agricultural training centre in Yambio under the "Strengthening and establishment of training institution

Items	Information
	<p>infrastructure” project. In order to reduce construction and operation costs, the facilities of the newly established agricultural training centre could be used for vocational training as well.</p>
(2) Objectives:	<p>The main objective of the project is to enhance the variety and quality of available classes at existing vocational training centres and to improve the availability of agricultural classes through establishing a new agricultural vocational centre.</p>
(3) Overall description including temporal and spatial extent of project:	<p>There are two components in the project. The first component is to improve the existing five vocational centres in terms of available agriculture courses. The second component is to establish an agricultural vocational centre.</p> <p>The 1st component is expected to be implemented in the first five years. Firstly, interviews and site visits need to be made in order to identify and clarify the current situation, including potential new courses. Objectives, roles, and existing curriculums (developed by MLPSHRD and the vocational training centres) of agricultural courses and classes of the existing vocational training centres must be assessed by the stakeholders. This will be facilitated by the Directorate of Education and Training and must take into account existing government policy and curriculums developed by MLPSHRD.</p> <p>Using the information from the assessment, a plan will identify improvements to vocational training centres. Human resources and financial management will be addressed. Class contents and materials for different durations will be reviewed and redeveloped based on the existing curriculums to accommodate various demands. Class contents of the vocational training centres should be consistent, but avoid duplication with the agricultural training centres and higher educational institutes such as universities. The vocational training centre in Rumbek could have more tailored courses designed for female students. Short term courses should be available and classes should be taken flexibly depending on students’ convenience.</p> <p>Course and class contents should be understandable and accessible to people with little formal education, and to socially vulnerable people, such as returnees, IDPs, refugees, women and people with disabilities. Additional training aids may be needed to meet this objective.</p> <p>Tuition fees for the vocational training centres need be collected from trainees, but should be affordable for those who wish to learn agricultural skills. Thus, the possibility of obtaining funding support, either by the government or private institutions, should be investigated, especially for longer courses.</p> <p>Collaboration should be arranged with the existing agricultural training centres to provide classes which are not available at vocational training centres. This would enhance the variety and quality of classes available.</p> <p>The 2nd component of the project is expected to be implemented in the following five years. The needs and possibilities of establishing a new agricultural vocational centre in Yambio will be assessed. Later, its roles, functions, size, and curriculum will be determined. The “Strengthening and establishment of training institution infrastructure” project is expected to establish an agricultural training centre in Yambio. The vocational training centre will share this facility.</p>
(4) Component structure:	<p>Component 1: Strengthening the existing vocational training centres through improvement of courses and classes related to agriculture</p> <p>Component 2: Establishment of a new agricultural vocational training centre</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1: Strengthening the existing vocational training centres through improvement of courses and classes related to agriculture</p> <p>Activity 1.1: Collect information to identify precise needs of each vocational training centre through interviews and site visits</p> <p>Output: Needs assessment and situation analysis report</p> <p>Activity 1.2: Re-define and develop roles, objectives, operation plan, and knowledge and skills obtained from current courses at the vocational training centres as well as possible new courses with affordable tuition for potential students</p> <p>Output: Re-defined and/or clarified roles, objectives, and operation plan for agricultural classes at existing vocational training centres</p> <p>Activity 1.3: Review and standardise course and class contents to meet agricultural needs especially for adults, low income and socially vulnerable people</p> <p>Output: Reviewed and improved practical and affordable agricultural courses which are different, with their emphasis on vocational training, to those from other educational institutes. Available classes are crop production, soil science, horticulture, plant breeding and protection, post-harvest handling, farm machine</p>
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Items	Information
	<p>operation and maintenance, production of farm animals and cattle production, sheep and goats production, pig production, poultry keeping, bee keeping, tree growing, agroforestry, fish farming, farm engineering, agri-business and market</p> <p>Activity 1.4: Discuss strategies and develop detailed plans for strengthening teaching staff capacity, teaching facilities, and equipment to increase available courses at each vocational training centre Output: Strategies and plans</p> <p>Activity 1.5: Seek new project funding sources and monitor appropriate budget execution to start and maintain new classes based on the improved curriculum Output: Secured funding source and required amount</p> <p>Activity 1.6: Recruit new teaching staff for re-organised and/or newly established classes Output: Recruited new teaching staff</p> <p>Activity 1.7: Create a collaborative relationship between the existing vocational training centres and with other agricultural training centres Output: Developed collaboration methods and strategies with other vocational training centres and other agricultural training centres</p> <p>Activity 1.8: Monitor and evaluate quality of newly started classes and activities Output: Monitoring and evaluation report</p> <p>Component 2: Establish a new agricultural vocational centre</p> <p>Activity 2.1: Visit Yambio area with the project staff for the Establishment of Training Centre and conduct interviews to identify demand for specialised vocational training centre for agriculture as well as availability of facilities and land Output: Needs assessment and situation analysis report</p> <p>Activity 2.3: Develop a detailed plan for establishing an agricultural vocational training centre with staff of Directorate of Agricultural Education and Training and other stakeholders Output: Detailed concept, roles, size, operation plan, locations, and facility plan</p> <p>Activity 2.4: Develop a curriculum and class contents with staff of Directorate of Agricultural Education and Training and other stakeholders Output: Curriculum and class contents (Expected available courses are basic agriculture, crop production, horticulture, plant breeding and protection, post-harvest handling, fruit production, food processing, farm machine operation and maintenance, production of farm animals and cattle production, sheep and goats production, pig production, poultry keeping, bee keeping, tree growing, agroforestry, fish farming, agri-business and market, product costing and pricing, farm engineering, etc.)</p> <p>Activity 2.5: Seek potential funding sources to establish and operate a new agricultural vocational training centre Output: Secured funding source and required amount</p> <p>Activity 2.6: Procure required equipment and furniture (Building for the vocational training centre in Yambio is expected be constructed by the “Strengthening and establishment of training institution infrastructure” project.) Output: Fully equipped vocational training centre</p> <p>Activity 2.7: Recruit required staff Output: New teaching staff and administrative staff are hired and started work.</p> <p>Activity 2.8: Prepare and start the new vocational training centre Output: Inaugurated new agriculture vocational training centre</p> <p>Activity 2.9: Monitor and evaluate quality of classes and operation of the new centre Output: Monitoring and evaluation report</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	Directorate of Agricultural Education and Training of MAFCRD provides technical and financial support, existing vocational centres cooperate to implement the project for the 1 st component. CTC Yei, Kagelu Forestry Training Centre, Marial Lou Livestock Training Centre, Padak Fisheries Training Centre, AMADI Rural Development Institute, Yei Agricultural Training Centre provide technical support. Ministry of Labour, Public Services and Human Resource Development, Ministry of Animal Resources and Fisheries support the project
(2) Description of beneficiaries within the framework of the project:	Students and staff of the existing vocational training centres, students and staff of a newly established agricultural vocational training centre, staff of the agricultural training centres

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<ul style="list-style-type: none"> • Establishment of new vocational training centre specialised for agriculture • Improved availability and quality of agricultural education through strengthening curriculums of all existing vocational training institutes • Increased numbers of the people who own practical knowledge and skills about agriculture • Improvement of agricultural practices in South Sudan in the long term
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Items	Information
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<p>Negative: b Positive: c</p> <p>Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society</p>
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> Constructing new buildings will provide some negative environmental impacts. After commencement of the vocational training courses, some chemicals might be used such as fertilizers and pesticides. Excrements from livestock and poultry would cause negative environmental impacts. Some clarification of land use might be necessary to construct the required facilities in Yambio (for example, land tenure, cutting down of trees to clear the site). Therefore, development guidelines to minimize environmental and social impacts are suggested. Excrements from livestock and poultry could be utilized to make manure to minimize negative environmental impacts. <p>(Positive)</p> <ul style="list-style-type: none"> In the long term, improving the variety and quality of courses of vocational training opportunities will bring strong positive impacts to a broad range of the population, from ordinary people to socially vulnerable people such as IDPs, returnees, refugees, women, youth and people with disabilities.

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> Number and available classes related to agriculture at each vocational centre Number of enrolled and graduated students for agricultural courses (sex disaggregated)
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> Number of functioning vocational training institutes Number of available classes related to agriculture at each vocational training centre and other established agricultural vocational training institutes Number of enrolled students and graduates from relative agricultural courses (sex disaggregated) Amount of budget and number of funding sources for each vocational centre and other established agricultural vocational training institutes Number of students who find employment opportunities after completion of a course and types of their employment opportunities (sex disaggregated)
(3) Methods of measurement and sources of information:	Records of vocational centres, records of newly established agricultural vocational centres, project reports, government documents, monitoring and evaluation report
(4) Responsible parties for the monitoring and evaluation:	Directorate of Agricultural Education and Training of MAFCRD, MLFI, and MLPSHRD

2.7 Required human resources

(1) Principle of human resources management:	People in charge of this project need to have cooperative attitudes and flexibility to implement the project while respecting the existing projects, programmes, and policies related to vocational training as well as ability to listen to staff of MLPSHRD and vocational training centres. Some project staff members who have educational and/or agricultural training backgrounds would contribute to the implementation of more practical and realistic activities.
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> Project manager (one senior staff) Project staff (five staff covering the following specialities: agronomy, forestry, animal husbandry, fisheries, agricultural education/training) for project detailed design, project implementation and management, procurement, logistics, and monitoring, etc. <p>At least one of the above staff members should be selected from the Directorate of Agricultural Education and Training of MAFCRD. Staff of MLFI and MLPSHRD involved in this project implementation and all staff at the new and existing agricultural vocational centres must buy in to this project.</p>
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Consultants in the field of :</p> <ul style="list-style-type: none"> Project management (Master's degree, 15-years experience): One Agronomy (BSc or BA, 10-years experience or more): One Animal husbandry (BSc or BA, 5-years experience or more): One Forestry (BSc or BA, 5-years experience or more): One Fisheries (BSc or BA, 5-years experience or more): One Vocational training (BA, 10-years experience or more): One Social consideration (BA, 5-years experience or more); One Project coordinator (BA in Education or Agriculture, 3-years experience or more): One

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	H L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	<p>The following risks should be considered.</p> <ul style="list-style-type: none"> Possibly difficult to obtain cooperative attitudes about project implementation by MLPSHRD

Items	Information
	<ul style="list-style-type: none"> • Difficulties of securing funding to operate the newly established agricultural vocational centre • Difficulties of finding and maintaining funding sources to strengthen the existing vocational training centres as well as setting lower tuition fees • Difficulties to find qualified teachers who can commit on a part-time basis • Insecurity and conflicts at target sites and interview sites

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	<p>In the process of implementing activities for the both components, coordination with MLPSHRD, and MLFI are crucial to make this project successful. Existing policies, documents, project outputs need to be respected and the detailed project activities should be designed according to them.</p> <p>Moreover, clear demarcation between existing agricultural training centres and the existing vocational training centres under the control of the Ministry of General Education and Instruction would clarify roles of agricultural classes at vocational training centres under MLPSHRD.</p> <p>Financial sources need to be stabilized to make the amount of tuition affordable for the lower income population which will be one of the critical factors for the success of this project. Support from NGOs and private corporations could be options to find alternative funding sources.</p>
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>Periodic monitoring should be conducted by the Directorate of Agricultural Education and Training of MAFCRD jointly with staff of MFLI and MLPSHRD. Monitoring items would be number of available classes, number of enrolled students, number of students who complete a course, number of socially vulnerable people who enrolled and completed classes, budget expenditure for each fiscal year, available teachers, situation of collaborations with other vocational centres and agricultural training centres, and students' satisfactory levels, etc.</p>
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2.4.28 Private sector investment project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Crop		
(2) Project name:	Private sector investment project		
(3) Project ID:	0 1 2 8 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2022/23	Ending FY: 2031/32	Duration (years): 10
(5) Total investment:	SSP 8,818,000	USD 2,204,000	Note: Not including recurrent cost
(6) Name of this file (automatic):			

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		CR.SA4	Private sector business and projects	Table 2-3
(2) Government organisation:	12	MAF-PE	Directorate of agriculture production and extension service	Table 2-6
(3) Activity types:	203	SP-EX	Service delivery/infra. Dev.-Extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	X
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	X
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	X
	06	PS	Private sector project	X
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	X
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

South Sudan has vast potential for agriculture development because of its favourable climate (enough rainfall and appropriate temperatures) and abundant undeveloped land with fertile soil. However, agricultural investment by the private sector has not fully materialised due to a weak legal framework, insecurity, undeveloped infrastructure, unclear land tenure, informal/illegal multiple taxation etc.

In December 2013, the government held a South Sudan investment conference to facilitate private sector agriculture investment. During the conference the large potential of agriculture development of South Sudan was emphasised and some higher priority opportunities for investment were introduced (e.g. Aweil Rice Irrigation Scheme, Nzara agro-industrial complex, and Yirol oil mill). However, immediately after the conference, the investment environment deteriorated extensively due to internal disputes.

Since private investment is the most crucial engine of agriculture development and transformation, the government has to make efforts to create a favourable environment for private investors and explore opportunities for large and medium scale private sector investment in agri-business. To promote private sector investment, the following conditions need to be provided by the national and state governments:

- political stability
- security
- firm legal base (business registration, agriculture related laws/regulations, and import/export regulations)
- easy access to necessary information/data
- infrastructure development (roads, bridges, electricity, communication and water)
- clear land acquisition/lease processes
- intellectual property protection
- clear dispute resolution processes
- good governance (anti-corruption and no informal/illegal taxation)
- functional markets (inputs, outputs and labour)
- functional financial institutions.

Since these conditions are not under the jurisdiction of the Ministry of Agriculture, Forestry, Cooperatives and Rural Development (MAFCRD) and Ministry of Livestock and Fisheries Industries (MLFI), inter-ministerial coordination mechanisms need to be established to facilitate more vigorous private investment in the agriculture sector. Thus, this project will support the establishment of such coordination mechanisms so as to realise a better environment for effective and easy agri-business investment by private investors.

(2) Objectives:

The objective of the project is to establish a favourable environment for private investors to capitalise on the investment potential in the agricultural sector, especially for large and medium scale private sector investment.

(3) Overall description including temporal and spatial extent of project:

The project will focus on creating a conducive environment for private agri-business investors in order to create more investment. The government should not operate businesses itself through parastatal organisations, but support private sector activities by providing a better business environment. To achieve this, the project will address the establishment of a firm legal base, promotion of easy access to information/data, establishment of inter-ministerial coordination mechanisms, and strengthening of linkages among government at all levels, investors and farmers.

(4) Component structure:

The project duration is 10 years starting from fiscal year 2022/23. The project covers all states with a special focus on potential production areas for exports (e.g. tea, coffee, sugarcane, cotton, and oil seed).

- Component 1: Establishment of a firm legal base
- Component 2: Provision of agri-business information on large and medium scale investment opportunities (tea, coffee, sugarcane, cotton, oil seed, etc.)
- Component 3: Establishment of favourable environment for private sector investment in collaboration with other government institutions
- Component 4: Facilitation of private sector investment by national and state governments targeting large scale commercial investors and small, medium, large and progressive farmers

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

Component 1: Establishment of a firm legal base
Activity 1.1: Prepare and enact laws and regulations related to private investment in agri-business, especially on land acquisition/lease, business registration, labour, protection of intellectual property rights, phytosanitary measures, standardisation,

Items	Information
	<p>import/export, and dispute resolution, This component is addressed by “Establishment of firm legal framework project” and “Enhancement of laws and regulations enforcement project”.</p> <p>Output 1: a firm legal base for agri-business established and laws and regulations enforced</p> <p>Component 2: Provision of agri-business information on large and medium scale investment opportunities (tea, coffee, sugarcane, cotton, oil seed, etc.)</p> <p>Activity 2.1: Collect information on large and medium scale investment opportunities as follows:</p> <ul style="list-style-type: none"> • tea: Upper Talanga tea scheme and high altitude areas in Hills and Mountain zone • coffee: existing coffee growers and other potential areas in the Greenbelt zone • sugarcane: Mongala sugarcane scheme and potential areas in the Flood Plains zones • cotton: potential areas in the Flood Plains zones • oil seed: potential areas in the Flood Plains and Ironstone Plateau zones and Yirol oil mill • irrigation schemes: Aweil Rice Irrigation Scheme (ARIS) and Renk scheme <p>Activity 2.2: Collect information on business environment of South Sudan in collaboration with other related institutions (e.g. Ministry of Commerce and Industry, Land Commission, and Chambers of Commerce)</p> <p>Activity 2.3: Provide collected information/data to investors (e.g. preparation of brochures and websites)</p> <p>Activity 2.4: Appoint agri-business focal points and establish information desk in MAFCRD and MLFI to effectively provide information for private investors</p> <p>Output 2: Necessary information/data on investment opportunities and business environment collected, information/data compiled and some information materials (e.g. brochures, website) prepared, focal points appointed and information desk established, number of access to information desks increased</p> <p>Component 3: Establishment of favourable environment for private sector investment in collaboration with other government institutions</p> <p>Activity 3.1: Establish coordination mechanisms with other institutions (e.g. Ministry of Commerce and Industry, Land Commission, Chambers of Commerce, Ministry of Transport, Roads and Bridges, Ministry of Electricity, Dams, Irrigation and Water Resources, state governments, research institutions and universities) to promote private sector investment</p> <p>Activity 3.2: Establish and promote business incentive schemes (e.g. tax exemption/concession and low interest rate loans provided by government financial institutions)</p> <p>Output 3: Coordination committee established and regular meetings held, and business incentive schemes developed and implemented</p> <p>Component 4: Facilitation of private sector investment by national and state governments targeting large scale commercial investors and small, medium, large and progressive farmers</p> <p>Activities 4.1: Raise awareness of national and state governments of potential private investment and Public-Private Partnerships (PPPs) so as to create favourable conditions for private investors</p> <p>Activity 4.2: Conduct periodic business forums for agriculture investment</p> <p>Activities 4.3: Facilitate (by national and state governments) business establishment by private investors (e.g. business registration and permission, access to land, security, taxation, dispute resolution, and infrastructure development)</p> <p>Activities 4.4: Facilitate (by national and state governments) matching of private investors and local institutions (e.g. large and progressive farmers, cooperatives, associations, farmers groups, local agro-dealers, local transporters, NGOs, financial institutions, universities, and public training and research institutions)</p> <p>Activities 4.5: monitor progress and issues concerning private investments and PPPs by national and state governments</p> <p>Output 4: Awareness raised at national and state government level and government staff understand the value of PPPs and private investment; number of business forums held, increased number of facilitations for business establishment and matching; regular monitoring conducted by national and state governments</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	Government: Staff of MAFCRD and MLFI, Ministry of Commerce and Industry, Chamber of Commerce, training and research institutes, financial institutions and state governments Private sector: financial institutions, agro-dealers and universities
(2) Description of beneficiaries	Mainly large and medium scale agri-business private sector investors, specifically in tea,

Items	Information
within the framework of the project:	coffee, sugarcane, cotton, oil seed, and irrigation Cooperatives, associations, farmers groups, local agro-dealers, local transporters, NGOs, private financial institutions

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	Project is expected to contribute to creation of new private sector agri-business investment, which would create significant number of job opportunities for women and youth
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: b</td> <td rowspan="2">Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society</td> </tr> <tr> <td>Positive: c</td> </tr> </table>	Negative: b	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society	Positive: c
Negative: b	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society			
Positive: c				
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> The project has potentially negative results if unregulated allocation of land to large scale foreign investors is made. Their demands may create conflicts with local small scale farmers/investors who may also require the same land. Also serious environmental degradation and social disturbances would occur, if environmental and social impacts of developments are not seriously examined in advance. <p>(Positive)</p> <ul style="list-style-type: none"> If there is careful planning and correct policies are implemented, large and medium scale private investors can be valuable contributors to the creation of a large number of jobs, and to the agricultural and economic transformation of the country. 			

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	Number of large and medium scale private investors in agri-business
(2) Measurable indicators and situation at the end point:	Number of large and medium scale private investors in agri-business Number of job opportunities created by newly established agri-businesses by large and medium scale investors Amount of products (volume and value) produced by newly established agri-businesses by large and medium scale investors Amount of export products (volume and value) produced by newly established agri-businesses by large and medium scale investors
(3) Methods of measurement and sources of information:	Data of National Bureau of Statistics and custom (tax and trading volume), MAFCRD and MLFI monitoring data/information
(4) Responsible parties for the monitoring and evaluation:	MAFCRD and MLFI in collaboration with Ministry of Commerce and Investment and Chambers of Commerce

2.7 Required human resources

(1) Principle of human resources management:	The government does not need to hire additional government staff for this project. But the government will try to improve the efficiency of service delivery of existing staff and realise efficient collaboration with public and private stakeholders.
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> Agri-business focal points (one Director or Deputy Director at MAFCRD and MLFI) Staff at state level (senior inspector level, 20 staff: two in-charges for each state) for monitoring In-charge at Ministry of Commerce and Investment and Chambers of Commerce
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Consultants in the field of:</p> <ul style="list-style-type: none"> One project management expert (Master degree, 15-years experience) One private investment expert (BSc or BA, 5-years experience) <p>Local consultants for information collection, data compilation, and brochure preparation will be hired.</p> <p>Local agro-dealers and private financial institutions will be involved to utilise their services.</p>

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	M L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	<p>Expected risk level might be medium due to the following reasons.</p> <ul style="list-style-type: none"> Insecurity of rural areas Delay of establishment of firm legal framework No clear land tenure and acquisition process and illegal land grabbing Informal and multiple taxation Corruption of some government officials Slow processes of business registrations and getting permissions Unfavourable conditions of access roads to reach investment sites

Items	Information
	<ul style="list-style-type: none"> • Conflicts or tensions among stakeholders, and between stakeholders and non-stakeholders • Gender disparity (negative cultural and customary practices) • Natural disasters (e.g. drought, flooding, bird pests, locusts and diseases) • Manmade disasters (e.g. insecurity, raiding, and ethnic conflicts) • Degraded soil fertility by mono-cropping in long-term (long-term risk)

2.9 Other special considerations and/or notes

<p>(1) Other special considerations and/or notes:</p>	<p>In view of the above, the full involvement of and careful consultation with communities to be affected by new agri-businesses are essential, especially in terms of land matters and social aspects, in order to avoid confusion and problems between investors and communities. In addition, dispute resolution processes involving local leadership should be clarified before starting new agri-businesses.</p>
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2.10 Routine operation and required resources after the completion of the project

<p>(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.</p>	<p>Continuous monitoring should be conducted by MAFCRD, MLFI and state governments. Periodic business forums and coordination meetings among MAFCRD, MLFI and other concerned institutions will be continued during and after the project period.</p>
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2.4.29 National crop pest and disease control project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Crop		
(2) Project name:	National crop pest and disease control project		
(3) Project ID:	01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2016/17	Ending FY: 2027/28	Duration (years): 12
(5) Total investment:	SSP 25,422,000	USD 6,355,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		CR.SA8	Pest and disease control	Table 2-3
(2) Government organisation:	09	MAF-PP	Directorate of Plant Protection	Table 2-6
	12	MAF-PE	Directorate of Agriculture Production and Extension Services	Table 2-6
	02	MAF-RE	Directorate of Research	Table 2-6
(3) Activity types:	203	SP-EX	Service delivery/infra. dev. - Extension and training	Table 2-12
	201	SP-IM	Service delivery/infra. dev. - Information management and analysis	Table 2-12
	204	SP-RE	Service delivery/infra. dev. - Research and experiment	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	X
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	X
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>Pre-harvest losses to pests, diseases and weeds have been estimated to average between 26 and 40 percent of potential yield across a range of major crops worldwide¹¹. Pests and diseases have been identified as the highest constraint (21% of all constraints) on crop production¹² across cropping systems in South Sudan. Some pests are subject to intermittent upsurges (locusts, armyworm, snails, rats).</p> <p>Many new invasive pests and diseases have either already entered the country in recent years, or are expected to gain access in the immediate future (e.g. exotic fruit fly pests, larger grain borer, maize lethal necrosis disease, cassava brown-streak virus, banana xanthomonas wilt). Unregulated large-scale movements of food grains from Uganda and Kenya to South Sudan undertaken by relief agencies have substantially increased the risk of such accidental introductions. No national government phytosanitary personnel are currently monitoring the borders of South Sudan and no Ugandan phytosanitary staff have yet been posted to Uganda's border with South Sudan¹³.</p> <p>Losses of stored grain to pests in traditional storage often exceed 30%, owing to infestation transferred from the field and prevailing high humidity (>14 %). Microbial pathogens attacking cereals, legumes and root crops (aspergillus, fusarium, ergot) are a source of mycotoxin contamination of human food and animal feed, with potential to cause illness and death.</p> <p>Use of pesticides has been discouraged by MAFCRD and no approved list has been gazetted. Input suppliers are not formally registered to sell pesticides. A very restricted range of older broad-spectrum pesticides is available in major towns.</p> <p>Farmers and the Community-Based Organisations (CBOs) and NGOs which support them lack skills to recognise pests, diseases and weeds and have few strategies to combat them other than early planting, farm sanitation, hand weeding and removal of sick plants (roguing). Some new seed varieties are less susceptible to pests and diseases, but others are potentially more susceptible. Weeding is a major problem, constrained by rural labour shortage.</p> <p>The majority of smallholder farmers, especially women farmers, are illiterate and have little or no access to information on management of pests, diseases and weeds. Extension staff, both state and NGO, are available at payam and county level, but lack mobility, resources and training to advise farmers on pest and disease diagnosis and management. A movement exists, with support from the national government and development partners, to organise farmers (especially women farmers) into cooperatives, permitting better access to inputs, services and markets.</p> <p>No effective linkage and feedback currently exists between county level extension staff (employed by the state Ministries of Agriculture and Forestry) and the Plant Protection Department of the national MAFCRD. This means there is no mechanism to transfer information on pests and diseases between plant protection professionals and farmers, or vice versa. There is no central database of plant pests and diseases within South Sudan, either in MAFCRD or elsewhere. This will be needed as a basis for phytosanitary risk assessment and decision-making on regulating admission of particular classes of products that may introduce pests and diseases that could threaten South Sudan's national food security and food sovereignty.</p> <p>The policy environment is favourable to an integrated pest management approach (IPM), using all available methods to manage pests safely. However, there is no legislative framework and almost no national or state government budget for pest management (or for agriculture more generally), other than provision of salaries for staff.</p>
(2) Objectives:	<p>The overall goal of the proposed plant clinic project is to increase food security, alleviate poverty and improve livelihoods by enabling farmers in South Sudan to lose less production, grow more food and improve the quality of what is grown. The purpose is to enable farmers to reduce crop losses to pests and diseases and weeds, and to achieve improved crop health, yield and produce quality.</p>
(3) Overall description including	<p>The plant clinic approach proposed for the "National pest and disease management</p>

¹¹ Oerke, E.C. 2006. Crop losses to pests. Journal of Agricultural Science (2006), 144, 31–43. Available online at: http://www.nrel.colostate.edu/ftp/conant/SLM-proprietary/Oerke_2006.pdf

¹² WFP / FAO / MAF. 2006. quoted in African Development Bank, 2013. South Sudan: An Infrastructure Action Plan - A Program for Sustained Strong Economic Growth - Chapter 6 - Development of Agriculture in South Sudan.

¹³ Commissioner for Phytosanitary Services, Uganda, personal communication, November 2014.

Items	Information
temporal and spatial extent of project:	<p>project is based on the existing model of Plantwise plant clinics currently operating in 33 countries worldwide, of which 9 countries are situated in Sub-Saharan Africa, including several countries in eastern Africa (Rwanda, Uganda, Kenya, Ethiopia)¹⁴.</p> <p>The Plantwise plant clinic concept “Plantwise works with local extension services to provide poor smallholder farmers with access to advice on pest problems through a concept called plant clinics. These clinics operate like a human doctor’s surgery; they provide advice on demand, tailored to the farmer’s individual need. The clinics are made accessible to farmers by holding them on a regular basis in a prominent local meeting place, such as a market. When the farmer has a problem with a crop, he/she can bring a sample along to the plant clinic. At the clinic a trained ‘plant doctor’ listens to the farmer, examines the sample, diagnoses the problem and offers a suggested treatment. Treatment suggestions are affordable for farmers and use locally available resources. The correct chemicals are recommended only when necessary”¹⁵. Plant doctors do not sell pesticides, so as to avoid any potential conflict of interest¹⁶.</p> <p>Capacity development for pest management advisory services The project will train and certify plant doctors who will usually already be extension personnel (either public or NGO) holding at least a diploma or certificate level agricultural qualification. Basic training of plant doctors will consist of two four-day modules (Modules 1 and 2¹⁷), one focusing on pest diagnosis and remedies and managing plant clinics, the second on providing good advice. Trainees will undergo examinations to test their competence before being permitted to advise farmers. The project will provide plant doctors with the means to mobilise (motorcycles, fuel), some materials such as recording forms (or hand-held tablets¹⁸), printed materials and laminated pictures of key pests and diseases, and access to electronic backup through a growing online database of fact sheets and blog posts.</p> <p>Trainers of trainers and subject matter specialists will undergo the same training as the plant doctors, before serving respectively as trainers and supervisors of plant doctors. Subject matter specialists, in particular researchers, will also be trained in Plantwise Module 3: Elaboration of fact sheets and Pest Management Decision Guides (PMDGs). This module will also cover writing extension messages aimed at farmers on the basis of already elaborated Pest Management Decision Guides. Refresher training and training on specialised issues (e.g. new crop diseases, managing tablets) may be given to personnel at all levels. All training will stress the need to facilitate learning and behavioural change by illiterate farmers, especially women farmers.</p> <p>The project will utilize the training resources of national colleges and universities as well as those of neighbouring countries while building local capacity. In Uganda certificated short courses for training plant doctors are being run at Makerere University and a course unit on plant clinics is also being incorporated into the Makerere BSc Agriculture degree curriculum. Similar arrangements will be developed in South Sudan, through the University of Juba and through agricultural training colleges, such as CTC and YATC at Yei.</p> <p>Quality control and Monitoring and Evaluation Plant doctors will complete and send in plant clinic enquiry sheets for each farmer’s diagnosis and prescription to a national secretariat after checking by local supervisors. A national validation team composed of plant health specialists will review prescription sheets generated by the plant clinic network. Validation training for these specialists will be provided. A feedback system to report back to plant doctors on faulty diagnoses or recommendations will be put in place, including mobile phone consultations, visits to plant clinics by trainers and back-stopping researchers, and additional in service training sessions.</p> <p>Knowledge bank The Global Knowledge Bank is an open-access interactive website providing information on pest diagnosis, treatment and distribution data, gathered from plant clinics, researchers and international partners around the world. Users with clearance will be able to access a password-protected area, the Protected Online Management Systems (POMS), with data</p>

¹⁴ Plantwise, with funding from the European Union, is currently being implemented in nine African countries: Kenya, Uganda, Rwanda, Sierra Leone, Ghana, Zambia and Malawi, with some additional pilot activities in Mali and Ethiopia. Source: <https://cabiplantwise.files.wordpress.com/2014/11/final-report-main-11-2014-short-version.pdf>

¹⁵ Source: <https://cabiplantwise.files.wordpress.com/2014/11/final-report-main-11-2014-short-version.pdf>

¹⁶ See Plantwise policies at: <http://www.plantwise.org/strategy/plantwise-policies/>

¹⁷ In existing Plantwise programmes these have been three-day modules. However the Mid-term Review of EU support to Plantwise (2014) has proposed that training should be more thorough, hence the proposed 4-day modules here.

¹⁸ In Kenya use of hand-held tablets to record and upload diagnoses and prescriptions and to download information on diagnosis and remedies has been successfully trialled. This saves time and increases accuracy and efficiency.

Items	Information
	<p>from the plant clinic system on pest incidence and geographical distribution. The POMS will function as a national database of prioritized pests and diseases, informing stakeholders, including policy makers, on emerging pests and diseases. It will serve as an early warning system for inter-state and cross-border movements of invasive pests and diseases and provide guidance to phytosanitary personnel stationed at border posts. As recommended by the mid-term review of EU-support to Plantwise it is expected that pest datasheets already developed in other countries will be made available for use in South Sudan, substantially speeding up access to relevant information for plant doctors and farmers.</p> <p>Implementation Arrangements</p> <p>The global Plantwise system is supported by CAB International (CABI). A programme for South Sudan is already foreseen within CABI's development pipeline for Plantwise¹⁹. The South Sudan country programme will be coordinated and managed by a recruited Country Programme Manager and a small secretariat based alongside the MAFCRD's Department of Plant Protection²⁰, answerable to a national steering committee and an annual stakeholder meeting.</p> <p>The project will be based on close collaboration with all key stakeholders involved in extension, research, phytosanitary regulation and input supply. Plantwise will provide synergy with other models of extension, as well as providing links to the developing research system. In particular the project will support existing NGO extension systems, farmer field schools²¹, and programmes to create and resource agricultural cooperatives, especially women's coops²².</p> <p>There will be two primary partnerships. Firstly with the local organisations implementing the plant clinics (the "local implementing organizations"). These will include state Ministries of Agriculture and Forestry and county Departments of Agriculture, as well as larger NGOs and projects of development partners currently providing extension advice to farmers (e.g. FARM and UMCOR in Central Equatoria). The second key partnership will be MAFCRD as the "national responsible organisation" providing overall national oversight of plant clinic services and plant health issues.</p> <p>Technical back-stopping</p> <p>The need to involve institutions of higher and further education in training has already been mentioned. MAFCRD's research Directorate, Plant Protection Directorate (PPD) and universities also need to be involved in providing technical back-stopping and diagnostic support for the clinics. Agro-suppliers, seed companies, and the organisations that are involved in the input supply chain can also become partners through the provision of advice and resources. The project will also cooperate with partners holding complementary plant health datasets on diagnosis and treatment, which are especially important for the development of the Knowledge Bank. The partners will include BioNET, CGIAR centres (ICRISAT, IITA, ICRISAT, CIAT) and regional plant protection organisations and programmes (AU-IAPSC, AGRA, ASARECA etc).</p> <p>Initially centres of excellence in neighbouring countries, such as Namulonge, Uganda and KEPHIS in Kenya will be commissioned to provide assistance with training and provision of diagnostic services (e.g. for plant viruses). A national phytosanitary diagnostic laboratory will need be designed, built and equipped to service multiple national needs, including the Plantwise programme. This could possibly be set up at the Yei Agricultural Research Centre (YARC), from where it could also service the developing national research system and provide diagnoses for phytosanitary interceptions at border posts.</p> <p>Temporal Extent and Sustainability</p> <p>The National Pest and Disease Management Project will need to be financially sustained by development partners over at least a twelve-year horizon. Three sub-projects, of four years each are envisaged to achieve national coverage (see below).</p> <p>Over time the plant clinic network can eventually become more self-sustaining, through incorporation of recurrent costs in national and state government budgets, and by the cost of plant clinics being allocated as a budget line within other crop-based development initiatives. From year 9 onwards responsibility for resourcing the system in the Greenbelt zone, and central responsibility for secretariat functions and back-stopping would be</p>

¹⁹ see page 17 of the Plantwise brochure, "Plantwise, a strategy for improving food security and rural livelihoods".

²⁰ The MAFCRD Department of Plant Protection is still awaiting a decision (as at November 2014) on whether it is to be upgraded to a Directorate.

²¹ such as the FFS previously operated by GIZ and Agricultural Advisory Services (AAO). See "Achieving Food Security in a Post Conflict Context: Recommendations for a Farmer Field School Approach in the Greenbelt of South Sudan". SLE Publication Series. S253. Humboldt Universität zu Berlin. December 2012.

²² See for example the UN Women / MAFCRD Concept Paper: "Increased access to agricultural support services for women groups in Western Equatoria, Eastern Equatoria, Western Bahr el Ghazal, Lakes and Warrap State". 13 pp. (undated).

Items	Information
(4) Component and activity structure:	<p>progressively devolved to state and national governments. Progress on realising this objective will require clear commitment from the national and state governments.</p> <p>Spatial extent All agro-ecological zones would be covered, apart from the Nile and Sobat Rivers zone and the Pastoral zone of Jonglei and Eastern Equatoria. A pilot plant clinic system should be set up in the Greenbelt of southern South Sudan (Western, Central and Eastern Equatoria States) as an early priority. This should train a mix of government and NGO extension workers, to assist farmers (especially women farmers) with pest and disease diagnosis and treatment. Subject to satisfactory progress in putting in place all the basic elements of a plant clinic-based advisory service and meeting performance targets, this could be out-scaled to the Greater Bahr-el-Ghazal region and ultimately to the whole country in three sub-projects:</p> <ul style="list-style-type: none"> • Sub-project 1 (Years 1-4): Initial system set-up and plant clinic personnel training and mobilization in the Greenbelt zone of Western, Central and Eastern Equatoria; • Sub-project 2 (Years 5-8): Out-scaling plant clinic personnel training and mobilization to Northern and Western Bahr el Ghazal and Lakes States; development of diagnostic laboratory facilities; • Sub-project 3 (Years 9-12): Out-scaling plant clinic personnel training and mobilization to Upper Nile, Unity, Jonglei, and Warrap States; progressive hand-over of financial responsibility for resourcing of plant clinic extension staff in the Greenbelt zone (Western, Central and Eastern Equatoria) to state governments.
	<p>Component 1: Set up and implement management structures Component 2: Identify suitable personnel and provide training Component 3: Mobilize plant clinics and enhance outreach Component 4: M & E: validation, quality control and feedback Component 5: Set up and maintain Global Knowledge Bank and POMS Component 6: Develop tailored illustrated resources for field recognition of plant pests and diseases</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Set up and implement management structures Activity 1.1: Set up National Secretariat; procure vehicles²³ and office furniture Activity 1.2: Put financial management systems in place Activity 1.3: Convene National Steering Committee Activity 1.4: Conclude agreements with extension at state level Activity 1.5: Convene Annual Stakeholder Meeting Outputs: Year 1. all necessary management structures, financial systems and agreements in place to undertake plant clinics (Staff: 1 x manager, 1 x administrator/accountant, 1 x secretarial assistant, 1 x driver/handyman). Equipment procured: 3 desks, 4 chairs, three portable computers, 2 printers/copiers, 1 4WD vehicle. Sub-project 1, Years 1-4: 16 motorbikes for trained supervisors.</p> <p>Component 2: Identify suitable personnel and provide training Activity 2.1: Identify and train suitable state and NGO extension staff as plant doctors (Modules 1 and 2) Outputs: Sub-project 1 (Years 1-4): 12 new state and 4 new NGO extension staff trained annually as plant doctors to staff 8 new plant clinics per year x 4 years Outputs: Sub-project 2 (Years 5-8): 12 state and 4 NGO extension staff trained annually as plant doctors to staff 8 new plant clinics per year x 4 years Outputs: Sub-project 3 (Years 9-12): 12 state and 4 NGO extension staff trained annually as plant doctors to staff 8 new plant clinics per year x 4 years Activity 2.2: Identify and train suitable state and NGO plant doctor trainers and supervisors Outputs: Sub-project 1 (Years 1-4): 3 state and 1 NGO trainers and subject matter specialists trained as trainers and supervisors of plant doctors per year x 4 years Outputs: Sub-project 2 (Years 2-8): 3 state and 1 NGO trainers and subject matter specialists trained as trainers and supervisors of plant doctors per year x 4 years²⁴. Outputs: Sub-project 3 (Years 9-12): 3 state and 1 NGO trainers and subject matter specialists trained as trainers and supervisors of plant doctors per year x 4 years²⁵. Activity 2.3: Identify and train suitable subject matter specialists as developers of fact sheets and Pest Management Decision Guides (PMDGs) (Module 3) for distribution to extension staff and farmers. Outputs: Sub-project 1 (Years 1-4): 2 MAFCRD and/or university-based subject</p>

²³ A single all-terrain vehicle (e.g. Toyota Landcruiser Prado) would be needed for visits from the office to field sites. Plant doctor supervisors would be supplied with motorbikes, while plant doctors who already have motorbikes would receive mileage allowances to cover fuel and maintenance costs and those who do not would receive allowances to cover bodaboda fares (as in Uganda).

²⁴ Cumulative total 32.

²⁵ Cumulative total 48.

Items	Information
	<p>matter specialists/researchers trained in elaboration of pest and disease factsheets, PMDGs and extension messages per year x 4 years Outputs: Sub-project 2 (Years 5-8): 2 MAFCRD and/or university-based subject matter specialists/researchers trained in elaboration of pest and disease factsheets, PMDGs and extension messages per year x 4 years Outputs: Sub-project 3 (Years 9-12): 2 MAFCRD and/or university-based subject matter specialists/researchers trained in elaboration of pest and disease factsheets, PMDGs and extension messages per year x 4 years</p> <p>Component 3: Mobilize plant clinics and enhance outreach Activity 3.1: Develop and implement a strategy for staffing and positioning clinics; Outputs (Sub-project 1): Eight new clinics²⁶ running each year. Each clinic runs 20 times per year with two plant doctors, plus one junior community extension worker assisting. Average of 20 farmers (or farmer group representatives) assisted per clinic session (400 farmers assisted per clinic year), 3200 farmers assisted in year one (8 clinics), 6400 in year 2 (16 clinics), 9600 in year 3 (24 clinics) and 12,800 in year 4 (32 clinics). Outputs will increase <i>pro rata</i> in sub-projects 2 and 3. Activity 3.2: Foster links with other stakeholders (NGOs, projects, private sector input suppliers²⁷, cooperatives); Outputs: Stakeholders participate in attending, recommending or resourcing plant clinic network. Activity 3.3: Advertise plant clinics via radio and in local newspapers, through extension providers and directly to farmers' organizations; assess impact of seasonality and type of advertising on clinic uptake. Outputs: 12 monthly advertising messages using various media in years one to four; report on assessment of advertising impact in year 4. Activity 3.4: Develop and implement other extension approaches to scale up the supply of plant health management information to farmer beneficiaries. Outputs: Approaches to increase outreach developed and implemented, including using local extension assistants to carry out triage amongst farmers waiting to be seen and to group farmers with similar plant health problems to be seen simultaneously²⁸; holding clinics to service larger cooperatives and farmer groups, holding plant health rallies with a special focus and e-extension. Outputs would increase <i>pro rata</i> in sub-projects 2 and 3.</p> <p>Component 4: M & E, validation, quality control and feedback Activity 4.1: Conduct training on Monitoring Plant Clinic Performance (MPCP) for supervisory staff; Outputs: One course per year (Years 1-12). Activity 4.2: Conduct training on validation, quality control and feedback on diagnoses and prescriptions for senior subject matter specialists. Outputs: One MPCP course every two year (Years 1, 3, 5, 7, 9, 11). Activity 4.3: Design and implement regime of rapid post-clinic quality control and feedback to plant doctors, including plant doctor peer review, supervisor sign-off, mobile phone consultations, visits to plant clinics by trainers and/or back-stopping researchers, and extra in-service training sessions where necessary. Outputs: A quality-control and feedback system to report back to plant doctors on faulty diagnoses or recommendations; >95% of prescription sheets are peer-reviewed and/or signed off by supervisors; at least 40 mobile phone consultations per year; 10 visits to plant clinics by trainers and back-stopping researchers per year; 2 in-service training sessions per year in years 1-12</p> <p>Component 5: Set up and maintain National Knowledge Bank and POMS Activity 5.1: Set up and maintain an open-access interactive website providing information on pest diagnosis, treatment and distribution data, gathered from plant clinics, researchers and international partners around the world. Outputs: To farmer and extension beneficiaries: electronic access to accurate and comprehensive descriptive and management data on all major East African pests and diseases of main food crops (maize, cassava, sorghum, beans, groundnuts) made available by end of Year 129. From beneficiaries: information on number of queries made to the system and relative frequency of use of particular information types.</p>

²⁶ A plant clinic need not be confined to a single specific site. Clinics may be held sequentially at different marketplaces or other gathering places on a regular basis.

²⁷ Dialogue is needed with local input suppliers who will be encouraged to refer their clients to plant clinics. Where it is necessary to recommend use of pesticides, e.g. for seed dressing of maize seeds, input suppliers will be asked to stock dressed seeds or other required products and plant clinic clients will be recommended to visit the input supplier to purchase them.

²⁸ See Mid-term Review of EU support to Plantwise: Sectin 3.2.2 Increasing Plant Clinic Capacity.

²⁹ It is crucial that the South Sudan National Knowledge Bank (NKB) should be rapidly populated from the Global KB and from national KBs of other participating countries in the region. Donors (especially the EU) have already invested heavily to create this knowledge and duplication of activity and wastage of resources must be avoided.

Items	Information
	<p>Activity 5.2: Set up and maintain a password-protected area, the Protected Online Management Systems (POMS), with data from the plant clinic system on pest incidence and geographical distribution, to facilitate development of a national database of prioritized pests and diseases. Outputs: From beneficiaries: information on number of queries handled (by gender of client³⁰), frequency of particular pest and disease queries and prescriptions given.</p> <p>Activity 5.3: Set up and maintain as part of the Protected Online Management Systems (POMS), a management M & E database derived from plant clinic records to show plant clinic frequency and geographical coverage, number of clinic beneficiaries assisted (by gender and possibly other characteristics); quantity and quality of diagnoses and advice provided by individual plant doctors. Outputs: Management information on clinic frequency and geographical coverage, characteristics of plant clinic users (by gender and possibly other characteristics) and plant doctor work rate and quality of performance.</p> <p>Activity 5.4: Provide diagnostic backup for plant clinics by commissioning any required Plant Pest and Disease Identification Services from regional or international sources, or from new diagnostic facilities in South Sudan to be created under other CAMP projects. Outputs: Average of 10 pest or disease samples per year (over 8 years) identified by external service providers.</p> <p>Component 6: Developing tailored illustrated resources for field recognition of plant pests and diseases</p> <p>Activity 6.1: Develop and distribute (in paper and electronic format) at least three illustrated information resources per year for specific plant pests or diseases, chosen according to frequency and/or seriousness of farmers' losses reported at clinics, suitable for farmers and/or extension staff. Outputs: At least three illustrated information resources per year for specific priority plant pests or diseases developed and distributed to beneficiaries (in paper and electronic format).</p> <p>Activity 6.2: Undertake translation into relevant local languages (in paper and electronic format) of at least two illustrated information resources per year for specific crop pests or diseases, chosen according to frequency and/or seriousness of farmers' losses reported at clinics, suitable for farmers and/or extension staff. Outputs: At least two illustrated information resources per year for specific priority crop pests or diseases translated into local languages and distributed to beneficiaries (in paper and electronic format)³¹.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	Primary service providers will be state and non-government extension staff providing advisory services to farmers. Secondary service providers will include MAFCRD Research Directorate and Plant Protection staff, university and training centre staff, national consultants and consultants from plant protection and research systems of neighbouring countries (chiefly Uganda and Kenya) engaged in providing capacity-building, quality control and back-stopping services in support of extension staff. Diagnostic services for plant pests and diseases will be commissioned as needed from national, regional or international sources.
(2) Description of beneficiaries within the framework of the project:	Primary beneficiaries are expected to be smallholder farmers and farmer groups growing more and better produce as a result of access to advisory services. Secondary beneficiaries will be front-line extension personnel at payam and county levels with enhanced skills, certification and resources for providing advisory services. Additional benefits will accrue to participating researchers and plant protection professionals operating as trainers and providing back-stopping, diagnostic or quality control services.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<p>The main outcomes of the project will be:</p> <ul style="list-style-type: none"> • Creation of an effective extension-based pest and disease diagnostic and advisory service providing support to smallholder (and other) farmers; • an operationalised integrated pest³² management (IPM) approach to crop protection in which farmers use appropriate pesticides only when necessary and in a way which does not adversely impact natural enemy populations or cause harm to human health or the environment. • an accessible and growing global knowledge bank will provide up to date information on
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³⁰ Gender reporting may be complicated by necessary moves to increase Plantwise outreach by asking farmer groups to send representatives to plant clinics with group problems who then report back to their group.

³¹ Note that to save time and expense, some of these should be adaptations and translations into local languages of information leaflets already produced through donor investment in Plantwise in neighbouring countries.

³² In IPM, the term "pest" is taken to include diseases and weeds.

Items	Information
(2) EIRR and/or FIRR, and/or other economic analysis:	<p>pests and diseases, incorporating a national pest database and early warning system for pest and disease outbreaks encountered by farmers, and acting as a basis for a demand-driven national pest and disease research programme and for phytosanitary pest regulation.</p> <ul style="list-style-type: none"> the national plant health system will be stronger, and more self-sustaining, with functional links among its members, requiring only limited external funding and support. <p>The Impact will be that that farmers experience reduced crop losses to pests and diseases and weeds, and achieve improved crop health, yield and produce quality.</p> <p>(if applicable)</p>

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td> Negative: b Positive: d </td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: b Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: b Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> While use of pesticides may increase somewhat from current low levels, it is expected that these will be less environmentally harmful products and will be used in combination with non-chemical methods as part of an IPM strategy which conserves the diversity of natural enemies of pests. <p>(Positive)</p> <ul style="list-style-type: none"> The project is expected to have a broadly positive impact on the environment through advisory services enabling farmers to utilize their farmland for cropping more efficiently and therefore to reduce their requirement for opening additional farmland. Some positive social impacts may result from enhanced household food security and livelihoods as a result of reduced crop losses due to following plant clinic advice. Additionally early warning of pest and disease upsurges could have wider positive impact. 		

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> Number (or %) of extension staff who have received training in pest recognition and management in previous year Number (or %) of farmers (in a given county) receiving specific crop-pest-related extension advice (individually or in groups) per year, pest problems identified, recommended prescriptions Farmer estimates of crop losses (and their causes) in previous year Annual estimated average crop yields of major crops
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> Number (or %) of extension staff who have received training in pest recognition and management in previous year Number (or %) of farmers (in a given county) receiving specific crop-pest-related extension advice (individually or in groups) per year, pest problems identified, recommended prescriptions Number of farmer prescription sheets requiring revision after review Farmer estimates of crop losses (and their causes) in previous year Numbers of plant clinics held and number of farmers attended to at plant clinics Number of extension staff utilizing the Knowledge Bank, purpose of access and specific outcome of use Number of leaflets developed for use by farmers or extension staff Average % reduction in crop losses (and crop and cause of loss) estimated by farmers who have visited plant clinics Annual estimated average crop yields of major crops
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> Protected Online Management System (POMS) records of numbers of clinics, numbers (and gender breakdown) of farmers receiving assistance, quality of plant doctor diagnoses and recommendations Records of sample questionnaire surveys of farmers Case studies of farmers attending plant clinics AFIS crop yield surveys
(4) Responsible parties for the monitoring and evaluation:	<p>Plantwise national secretariat; local NGOs/CBOs commissioned to undertake surveys among farmers; external evaluators appointed by development partner(s)</p>

2.7 Required human resources

(1) Principle of human resources management:	<ul style="list-style-type: none"> This project makes use of the pool of state agricultural extension staff distributed thinly across most counties (especially in the Greenbelt zone) who are currently underutilized and lack resources to meet with farmers and address their needs. The plant clinic activity is estimated to occupy, on average, no more than 20% of the time of any individual extension worker, leaving them time for other essential duties. Intermittent use is also made of experienced national level staff of MAFCRD and
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Items	Information
(2) Required human resources in the public sector (Positions, grades and numbers):	<p>universities to train and back-stop the state extension personnel. Initially some regional consultants will be utilized to enhance the skills of all actors in key areas of plant clinic operation.</p> <ul style="list-style-type: none"> • A secretariat with full-time project staff will be created to manage the project, with a view to handing over to full MAFCRD responsibility in Year 1 of sub-project 3, after 104 months. • MAFCRD Plantwise Liaison Officer (MSc, 10 years experience) one • MAFCRD subject matter specialists / researchers, providing capacity-building, quality control and back-stopping services in support of extension staff to Plantwise (MSc, 10 years experience) 2 in Year 1 to ≤ 8 in Year 4 • County level public extension service personnel (at least certificate, preferably diploma or BSc for supervisors) (Two per plant clinic) • Local extension agents (school certificate) one per plant clinic³³
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<ul style="list-style-type: none"> • Plantwise Project manager, South Sudan (Master's degree, at least 10 years experience): one³⁴ • Knowledgebase management & communications specialist (BSc, 7 years experience): one • Regional consultants from plant protection and research Systems of neighbouring countries (chiefly Uganda and Kenya) providing capacity-building, quality control and back-stopping services (Master's degree, at least 10 years experience): 4 • South Sudanese university or self-employed subject matter specialists / researchers providing capacity-building, quality control and back-stopping services in support of extension staff to Plantwise (MSc, 10 years experience) from 2 in Year 1 to ≤ 8 in Year 4³⁵ • Secretary (certificate, 5 years) one • Driver/handyman (school certificate, 5 years) one • Local extension agents (school certificate) one per plant clinic³⁶

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:

M	L: Low	M: Medium	H: High	(select an indicator from the list)
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(2) Explanation of expected risks:

	<ul style="list-style-type: none"> • Security risks could prevent access to significant areas of the country (as at present). This would mainly limit the spatial extent of project roll-out in sub-projects 2 and 3, unless security conditions deteriorate in areas currently considered reasonably secure. • There is currently a shortage of skilled professionals in agricultural specialities such as pest management, and especially plant pathology within MAFCRD and the universities who can act as trainers of trainers and provide diagnostic back-up. This is expected to be addressed by BSc degree and Masters degree level training over coming years.
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2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:

	<p>Criteria for selecting target farmers should be discussed and decided with stakeholders in advance and the selection process should be transparent both for beneficiaries and stakeholders. Gender balance should also be considered for selection.</p>
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.

	<ul style="list-style-type: none"> • Extension support to farmers will continue at whatever level national and state governments, NGOs and development partners are able to support (transport and communication allowances). This should include at least part-time involvement of two state extension staff per county (in approx. 80 counties³⁷) and a variable number of payam based local extension agents and NGO extension staff. • There will need to be ongoing training of scientists and technical staff in MAFCRD and the universities to maintain capacity to provide advisory support services for farmers. • Diagnostic services, especially for plant diseases (bacterial, fungal and viral) will require the maintenance of a permanent diagnostic laboratory capability, including professional and technical staff and access to normal services (water, electricity, internet).
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³³ These junior extension assistants may or may not be formally employed by the state extension services.

³⁴ This position will be filled initially by a regional consultant with previous experience of running a Plantwise programme.

³⁵ The eight subject matter specialists may be sourced either from MAFCRD, university or self-employed specialists. The numbers from each source cannot be determined in advance since the skill-sets needed are in short supply.

³⁶ These junior extension assistants may or may not be formally employed by state extension services.

³⁷ A few counties may not justify dedicated extension input for plant clinics as they are mainly composed of pastoral or fishing communities. However, if necessary clinics in these counties could be supported from neighbouring counties.

01.29 National crop pest and disease control project (cont.)

SSP/USD = 4

Project duration	Phase 1					Phase 2					Phase 3					Phase 4					Total						
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000	% to total
2 Construction of infrastructure and procurement of equipment	464	296	296	296	462	296	296	296	312	296	296	296	296	296	296	296	296	296	296	296	296	296	296	296	296	3,902	976 15%
1 Construction of office buildings																											
2 Construction of research, training and other specialized buildings																											
3 Construction of feeder roads																											
4 Construction of production, market and transportation facilities																											
5 Acquisition of land																											
6 Procurement of vehicles	190	40	40	40	190	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	780 195 3%
1 Pick-ups	150				150																						300 75 1%
2 Motorbikes	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	480 120 2%
7 Procurement of equipment	274	256	256	256	272	256	256	256	256	272	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	3,122 781 12%
1 Office equipment	2																										2 1 0%
2 ICT equipment	16				16																						48 12 0%
3 Data collection tablets	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	3,072 768 12%
3 Subsidies, equity and loans																											
1 Provision of cash and/or in-kind subsidies																											
2 Provision of training services to the private sector																											
3 Equity investments																											
4 Provision of loans																											
5 Social assistance/donation (Emergency)																											
Total (SSP '000)	2,929	2,310	2,011	2,153	2,506	2,385	2,428	2,503	2,295	1,305	1,280	1,316															25,422 100%
Total (USD '000)	732	577	503	538	627	596	607	626	574	326	320	329															6,355
% to total	12%	9%	8%	8%	10%	9%	10%	10%	9%	5%	5%	5%															100%

Public sector project
Routine work by government

Private sector project
Routine work by private sector

2.4.30 National phytosanitary infrastructure project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector	Crop		
(2) Project name:	National phytosanitary infrastructure project		
(3) Project ID:	01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2016/17	Ending FY: 2017/18	Duration (years): 2
(5) Total investment:	SSP 6,041,000	USD 1,510,000	Note: Not including recurrent cost
(6) Name of this file (automatic):			

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:	CR.SA3		Public Infrastructure Development	Table 2-3
(2) Government organisation:	09	MAF-PP	Department of Plant Protection ³⁸	Table 2-6
	02	MAF-RE	Directorate of Research	Table 2-6
(3) Activity types:	209	SP-EI	Service delivery and infrastructure development – Economic Infrastructure Development	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	X
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	X
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	

³⁸ The Plant Protection Department is not currently officially approved as a Directorate (November 2014).

Items	Information		
61	FGI	Financed by generated income	X

Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

Approximately 78% of households in South Sudan are engaged in agriculture³⁹, the majority of whom are subsistence farmers who cultivate crops for home consumption. Pests and Diseases have been identified as the highest constraint (21% of all constraints) on crop production⁴⁰. Satti (2011⁴¹) listed 26 non-native insects of economic importance which have invaded Sudan (including areas now in South Sudan), mostly as a result of unregulated movements of infested plant material and he identified a further ten species of quarantine pests posing an imminent threat of establishment.

Many new invasive pests⁴² have either already entered South Sudan in recent years, or are expected to gain access in the immediate future (e.g. several exotic fruit fly pests, larger grain borer, maize lethal necrosis disease, cassava brown-streak viruses, banana xanthomonas wilt). Each of these pests can cause serious economic production losses on impacted crops. In Kenya, maize lethal necrosis disease (MLND) has become a significant threat to national food security in just two years, with the 2014-15 long rains maize crop expected to be as much as 30% below the five-year national average of 2.7 million metric tons, due to below-average rains and losses to MLND⁴³, which have affected 70% of maize farmers.

Unregulated large-scale movements of food grains and cassava from Uganda and Kenya into South Sudan undertaken by relief agencies have substantially increased the risk of such accidental introductions. Mass movements of refugees fleeing from conflict zones, or subsequently returning to their home areas, are also a potential cause of accidental plant pest and disease introductions.

In late 2014 Southern Sudan acceded to the International Plant Protection Convention (IPPC). Under the IPPC rules the primary responsibility for phytosanitary regulation rests with the designated National Plant Protection Organization (NPPO), currently the Department of Plant Protection of MAFCRD⁴⁴. Contracting parties are expected to exercise phytosanitary controls at national borders, to maintain up-to-date lists of regulated plant pests known to occur within their territories and to conduct surveillance to support non-records of occurrence as a basis for their quarantine regulations. Absence of such systems is recognised as a key constraint in negotiations on trade.

There is no current phytosanitary regulation in force in South Sudan. No national or state government phytosanitary personnel are currently monitoring the borders of South Sudan and no Ugandan phytosanitary staff have yet been posted to Uganda's border with South Sudan⁴⁵. However small facilities originally intended for seed testing were constructed with funding from the Dutch (Netherlands) Government under the Support to Agriculture and Forestry Development Project (SAFDP) at three border crossing points (Nimule, Nadapal and Kaya).

MAFCRD is acutely aware of the vulnerability of South Sudan to the ingress of invasive species by infected or infested plant materials but currently lacks capacity and resources to develop the necessary regulatory apparatus. MAFCRD's Plant Protection Policy⁴⁶ is composed of six policy statements which include (No 6): "*Control and prevention of entry into the country of diseases and pests, contaminated seeds and planting materials*". MAFCRD has recently developed the first draft of a National Plant Protection Act. This is still incomplete, requiring a greater degree of detail and stronger linkages to the Constitution of South Sudan and to relevant international conventions (the World Trade Organization Agreement on Application of Sanitary and Phytosanitary measures, the International Plant Protection Convention, the Codex Alimentarius, and the International Chemical Conventions).

³⁹ NBS. 2012. *National Baseline Household Survey 2009*. p. 53.

⁴⁰ WFP / FAO / MAF. 2006. quoted in African Development Bank, 2013. *South Sudan: An Infrastructure Action Plan - A Program for Sustained Strong Economic Growth - Chapter 6 - Development of Agriculture in South Sudan*.

⁴¹ Satti, A.A. 2011. Alien insect species affecting agriculture and natural resources in Sudan. *Agric. Biol. J. N. Am.*, 2011, 2(8): 1208-1221.

⁴² <http://scihub.org/ABJNA/PDF/2011/8/ABJNA-2-8-1208-1221.pdf>

⁴³ The IPPC defines a pest as "any species, strain or biotype of plant, animal or pathogenic agent injurious to plants or plant products". The understanding of the term "pests" includes organisms that are pests because they directly affect cultivated/managed or uncultivated/unmanaged plants, indirectly affect plants, or indirectly affect plants through effects on other organisms (c.f. Annex 1 of ISPM 11:2004).

⁴⁴ <http://www.fews.net/east-africa/kenya/food-security-outlook/october-2014>

⁴⁵ <https://www.ippc.int/countries/south-sudan>

⁴⁶ Commissioner for Crop Inspection and Certification, Uganda, personal communication, November 2014.

⁴⁷ Approved by the Minister but still awaiting Parliamentary approval (as at November 2014).

Items	Information
(2) Objectives:	<p>There is at present no diagnostic laboratory facility or national capacity to provide diagnostic services for insect and other invertebrate pests and for plant diseases caused by fungi, bacteria, viruses and other microbial pathogens. Field diagnosis of virus diseases based on visual recognition of foliage symptoms is unreliable and in the case of seed or cutting materials is inapplicable. The only definite diagnoses of plant viruses collected on the territory of South Sudan have been achieved by sending samples abroad for identification using polymerase chain reaction (PCR) techniques which detect and amplify viral DNA and RNA. FAO has sent samples of infected maize to the UK Food and Environment Research Agency (FERA), in 2014, free of charge, for diagnosis of maize viruses, but any future consignments are expected to be charged at normal commercial rates. In 2013 AGRA provided for samples of cassava to be sent to the Cassava Regional Center of Excellence at the National Crops Resources Research Institute (NACCRI), Namulonge, Uganda for identification of cassava mosaic virus and cassava brown streak viruses.</p> <p>To create the necessary basic phytosanitary infrastructure necessary to house and facilitate a national phytosanitary regulatory system for South Sudan⁴⁷, backed by law and regulations compliant with international conventions⁴⁸ and best practice, to:</p> <ul style="list-style-type: none"> • protect human, animal or plant life or health within the territory of South Sudan from risks arising from the entry, establishment or spread of plant pests, plant diseases, plant disease-carrying organisms or plant disease-causing organisms; • prevent or limit other damage within the territory of South Sudan from the entry, establishment or spread of pests. • protect human, animal or plant life or health within the territory of South Sudan from risks arising from importation of chemical and biological pesticides and biocontrol agents, while enabling farmers adequately to protect their crops and stored produce from pests and diseases. • facilitate compliance with international and regional phytosanitary requirements by plant products exported from the territory of South Sudan.
(3) Overall description including temporal and spatial extent of project:	<p>Responsibility for Phytosanitary Regulatory System</p> <p>The MAFCRD's Plant Protection Department, as NPPO is responsible for the phytosanitary import regulatory system, which prevents the introduction of quarantine pests and minimizes the entry of regulated non-quarantine pests with imported commodities and other regulated articles. A regulated article is any material capable of harbouring or spreading pests and deemed to require phytosanitary measures, particularly where international transportation is involved. This includes plants and plant products used for planting, consumption, or processing; packaging materials, including dunnage; soil, organic fertilizers, and related materials; potentially contaminated equipment, such as used agricultural and earth moving equipment; travelers' personal effects; and international mail⁴⁹. The requirement for phytosanitary regulation of imports and exports of agricultural produce has been described in detail in the "<u>Establishment of a national phytosanitary system project</u>".</p> <p>Phytosanitary service delivery</p> <p>Phytosanitary inspection and regulatory actions must be consistent with the requirements of the IPPC and World Trade Organization (WTO) Agreement on Sanitary and Phytosanitary Measures ("the WTO SPS Agreement")⁵⁰ and in harmony with recent legislation in neighbouring countries within the region covered by the African Union Inter-African Phytosanitary Council (AU-IAPSC). They should also follow recommendations of the <i>International Convention on the Harmonization of Frontier Controls of Goods (UNECE 1982)</i> which aims to facilitate the cross-border exchange of goods by harmonizing and reducing formalities, as well as the number and duration of border controls.</p> <p>The proposed ENPSP will include technical assistance visits by an experienced international phytosanitary legal consultant to prepare a draft plant protection bill and phytosanitary regulation. This specialist will be guided by a national interministerial working group composed of key stakeholders drawn from among representatives of organizations involved in sanitary controls for livestock, standards for foodstuffs (Bureau of Standards), the Civil Aviation Authority, customs revenue and trade, as well as MAFCRD's Plant Protection Department, representatives of private sector trade bodies (e.g. Chambers of Commerce) and international organizations involved in crop protection with offices in South Sudan such as FAO.</p>

⁴⁷ This project must be implemented with "Establishment of a national phytosanitary system project".

⁴⁸ Items a to d have been extracted (with the exclusion of references to animal diseases) from the WTO SPS Agreement's definition of an SPS measure.

⁴⁹ Kees van der Meer and Laura Ignacio. 2011. Chapter 16 *Sanitary and phytosanitary measures and border management*. pp 263-292. In: *Border Management Modernization*. Editors: Gerard McLinden, Enrique Fanta, David Widdowson, Tom Doyle. World Bank Washington, D.C. 2011.

<https://openknowledge.worldbank.org/bitstream/handle/10986/2544/588450PUB0Bord101public10BOX353816B.pdf?sequence=1>

⁵⁰ WTO, 1994.

Items	Information
	<p>Infrastructure for Phytosanitary regulation</p> <p>The proposed project will create appropriate basic infrastructure to enable the NPPO (the MAFCRD's Plant Protection Department) to conduct phytosanitary inspection of imports and exports of plants and plant products (including seeds) at national borders. This project is linked with the "<u>Establishment of a national phytosanitary system project</u>".</p> <p>A prioritized inventory of border crossing points should be agreed, based on those already tentatively proposed as sanitary control points for livestock inspection (Annex 1). For the purposes of this phytosanitary project, the immediate priority is a pilot system of three phytosanitary posts which can be brought into operation at the southern borders with Congo, Uganda, and Kenya. A fourth phytosanitary post should also be created in Juba airport, based on consultation and negotiation with the South Sudan Civil Aviation Authority.</p> <p>Prior to development partner funds being committed to construction or equipping of offices at border posts, assurances should be obtained from the national government that it has budgeted to finance the salaries and work of inspectors at the border posts in the next financial year. This will need to include provision of accommodation or housing allowances in addition to salaries and some form of mobility allowance.</p> <p>Border post structures, originally intended for seed inspection, have already been created at Nimule, Nadapal and Kaya, with Duthch (Netherlands) government funds provided through the SAFDP as support to the seed sector⁵¹. These facilities need to be physically assessed as to their suitability for phytosanitary use in terms of:</p> <ul style="list-style-type: none"> • their location in relation to customs, immigration and other border services, • their access to services such as water and electricity (if any), • the ownership of the sites and rights of way to them, • their physical security (fencing, guarding, doors, windows, grilles, locks, telephone), and • the current completeness and condition of the office accommodation and the presence or absence of basic furnishings. • their fitness for purpose and any modification needed. <p>The facilities at a border post should include, as a minimum, an office, a small basic laboratory, an incinerator and a lockable store. The facility will need access to water supply and electricity, at least during working hours. If necessary this will need to be provided by a generator. The laboratory should be provided with a bench and stools, with enough space to unpack, sort, examine and repack samples of produce. Office furnishings should include at least two desks, four chairs, a lockable metal cupboard, a lockable four-drawer filing cabinet and/or similar file storage. Equipment available at border posts should include: portable computer, printer, clipboards, recording forms, 3 x 1 inch screw-top plastic sample tubes, plastic bags, dissecting instruments (scalpels and forceps), magnifying glasses (10 x). Equipment for fumigation activities (tarpaulins, sand snakes, aluminium phosphide tablets (phostoxin) and related items) may also be required.</p> <p>Inspection activities at border posts and airports</p> <p>At the border, phytosanitary inspectors will check required papers (import permit, phytosanitary certificate, fumigation certificate etc), collect statistical and other information, and check whether the goods conform to the papers. The inspectors may carry out consignment integrity checks, verification of any treatment during shipment, and phytosanitary inspection. They may need to take samples, and perform simple tests or send samples to a diagnostic laboratory. Phytosanitary inspection of entire consignments is usually not practical and should be based on sampling.</p> <p>Initially inspectors would undertake a sensitization phase, warning importers of consignments of produce that they should obtain import permits by a stated date. After a suitable grace period, during which awareness raising activities would be conducted at border posts, substantive inspections and regulatory action would commence.</p> <p>Depending on the inspection results, a consignment might be detained in a post-entry quarantine station for inspection (if available⁵²), testing, or treatment (e.g. fumigation), or its distribution or use might be restricted. Entry of any consignment lacking appropriate phytosanitary documentation could be refused entry, fumigated or destroyed.</p>

⁵¹ See: World Bank, 2013. Implementation Completion and Results Report (TF-91282, TF-93011) on Grants in the Amount of US\$ 30.2 Million to the Government of Southern Sudan for a Support to Agriculture and Forestry Development Project. May 31 2013. Three vehicles were also provided to the seed project. Two of these are said to be available to the phytosanitary service (Cirino Oketayot, Director-General Research, personal Communication) but this needs to be verified.

⁵² This project should assess the need for a post-entry station and review facilities already developed for seed importation and testing under Dutch (Netherlands) funding provide through the SAFDP. Note that because field detection of plant viruses and other pathogens is inherently unreliable, open field quarantine of imported plant materials is unacceptably dangerous as wind and vectors may carry undetected pathogens to adjoining fields. However standards for enclosed post-entry quarantine facilities (in the form of screen-houses or other closed facilities) are very exacting and require that ventilation and drainage from the facility are rigidly controlled. This, along with 24 hour electrical power requirement are unlikely to be achieved anywhere in South Sudan.

Items	Information
	<p>Since there are no facilities for post-entry quarantine in South Sudan and no capacity at present to destroy large consignments, refusal of entry may be the preferred option for consignments of seed (or cuttings) intended for planting of food crops of national food security significance such as maize and cassava.</p> <p>For destruction of small consignments (e.g. of fruit without import permits and phytosanitary certificates that might carry fruit fly pests or plant diseases) simple brick-built batch incinerators⁵³ similar to those used by hospitals for medical waste could be installed near to border posts and at Juba airport. The alternative is to bag condemned plant materials in black plastic sacks and to bury them. However the labour of digging pits and covering waste with topsoil is likely to lead to non-observance of any SOP demanding burial, unless pits are pre-dug using an excavator, then fenced for safety and security of the contents, and gradually filled in as confiscated plant materials are buried.</p> <p>Fresh products would usually need to be checked and released (or rejected) at the border post. Other quarantined goods such as grain consignments with appropriate documentation might be sent to designated bonded warehouses operated by private contractors (if any), International Agencies (e.g WFP) or national or local government, where inspections could be carried out and from which the goods would be released after all diagnostic and any other requirements (e.g. fumigation) had been met.</p> <p>Confirmatory tests following internationally agreed protocols may be required to identify or confirm a visually detected pest, to check for infestations not detectable by inspection (if part of a requirement), and to check for latent infections. These would be carried out at a diagnostic laboratory. An example would be checking for seed-borne infections in maize seed for planting, such as maize lethal necrosis disease (MLND). In cases of noncompliance, such as the detection of a listed quarantine pest or a regulated non-quarantine pest in a consignment of plants for planting, measures such as detention, treatment, reshipment, or destruction may be taken. Administrative noncompliance, such as erroneous or incomplete phytosanitary certificates, would need to be resolved with the exporting country's national plant protection organization.</p> <p>Pest and disease diagnostic laboratory facilities</p> <p>In view of the phytosanitary threats posed by invasive plant diseases to South Sudan's agriculture, especially viruses, there is a need to develop national capacity to undertake plant virus diagnoses in South Sudan, rather than relying on diagnostic centres in countries which may themselves be exporting virus-infected planting materials to South Sudan. Creation of a laboratory diagnostic facility to identify pests and diseases associated with samples (intercepted at borders) of crops and stored produce⁵⁴ will be a component of this project.</p> <p>The accommodation within the proposed diagnostic facility should include a suite of rooms intended for virus diagnostics using polymerase chain reaction (PCR) techniques. This requires separate spaces for a sequence of processes in order to avoid nucleic acid contamination which might lead to false positive results⁵⁵: A PCR laboratory should contain two functional work areas: a pre-amplification area and a post-amplification area. These two areas should ideally be in separate rooms, or when space constraints exist, separate work stations/biosafety cabinets in a single room. Supplies and equipment (including lab coats) should be dedicated to each work area and should not be interchanged between areas.</p> <p>The proposed pest and disease diagnostic unit has a small staff and is deliberately envisaged as a single national facility. This could conveniently be based within a working government research centre (e.g. YARC⁵⁶) where its services would be of triple benefit: to extension, research and phytosanitary services.</p> <p>Temporal extent and sustainability</p> <p>The "<u>National phytosanitary infrastructure project</u>" is expected to have a duration of four years. This corresponds with the timeline already established for the "<u>Establishment of a national phytosanitary system project</u>". This short duration emphasizes that this project has closely-defined aims and its outputs needs to be put in place with all possible speed to counter the very real threats to national food security and food sovereignty posed by invasive plant pests and diseases. Provided that the necessary supporting legislation is</p>

⁵³ The De Montfort Type 8a incinerator can be made locally at an estimated cost of less than \$US1000 (2004 prices) exclusive of labour and can incinerate 12 Kg of medical waste per hour. A larger model can incinerate 50 Kg of waste per hour and costs \$US 1500. http://www.mw-incinerator.info/en/101_welcome.html

⁵⁴ Such a diagnostic laboratory facility is also required for the "National crop pest and disease control project" and for support to ongoing crops research by MAFCRD's Directorate of Research.

⁵⁵ WHO, 2011. Establishment of PCR laboratory in developing countries. WHO Regional Office for SE Asia.

⁵⁶ Yei has a stable electricity supply and is situated close to the Ugandan border, conveniently placed for servicing quarantine-related diagnostic needs.

Items	Information
<p>(4) Component and activity structure:</p>	<p>put in place without delays, there is no reason why an initial network of phytosanitary posts should not be in place within the stated timeframe.</p> <p>The initial impact on the national budget of maintaining phytosanitary facilities is relatively small and consists largely of running costs related to electricity and water supply and minor repairs and maintenance of the structures of the border posts and a small central office at MAFCRD in Juba. Phytosanitary services include some actions for which fees are payable (e.g. phytosanitary certificates, fumigation certificates). This will provide a small but growing revenue stream to government⁵⁷. However it is not expected that fees will be levied at border posts themselves. As the national phytosanitary service assumes its full mandate, widening its operations beyond the southern boundaries of the nation, additional border post facilities, based on the design developed under NPIP will be constructed. The incremental costs of the additional phytosanitary infrastructure therefore should easily be absorbed by a government budget benefiting from the peace dividend resulting from cessation of civil unrest.</p> <p>Spatial extent</p> <p>The NPIP will be a national level project, because the activities envisaged are mainly within the domain of the national government as the primary law-maker and signatory of international conventions. Border control points for phytosanitary checks may be situated ultimately in all ten states but under this project, which is intended to create and fine-tune a working system, operations will be restricted to the southern borders and to Juba international airport. The NPIP is designed to provide the necessary infrastructure for the phytosanitary system as a working model, based on prioritizing operations at the southern borders of the country through which the most serious phytosanitary threats are perceived to pass. It will be for the national government to extend this model to other borders as the improving security situation and the national budget allocation for agriculture may permit.</p> <p>It is envisaged that the states may enact their own legislation based on the national legislation, to protect their population, agriculture and environment from movements of pests, diseases and illegal plant protection products. The states may then decide to recruit, train and co-locate their own personnel alongside national phytosanitary staff at the border posts.</p> <p>There needs to be discussion between MAFCRD and the state Ministries of Agriculture and Forestry as to the extent and nature of any phytosanitary controls that may be exercised at state level. The essential priority is to prevent any unwarranted obstruction to international trade, in compliance with the IPPC and the WTO SPS agreement. South Sudan is not yet a member of the WTO⁵⁸, but its neighbours, Uganda, Kenya and Congo are all members and South Sudan will need to abide by WTO norms in order to trade with them.</p>
	<p>Component 1: (Years 1-2) Develop infrastructure for a national phytosanitary inspection service backed by legislation and compliant with international conventions (IPPC and WTO SPS).</p> <p>Component 2: (Years 2-3) Develop infrastructure for a national plant pest and disease diagnostic facility.</p>

2.2 Detailed description of project component, activity and outputs

<p>(1) Component, activity and outputs:</p>	<p>Component 1: Develop infrastructure for a national phytosanitary service backed by legislation and compliant with international conventions (IPPC and WTO SPS).</p> <p>Activity 1.1: Following completion of (i) recruitment of international phytosanitary consultant and development of TOR and Workplan (ENPSP Activity 1.1), (ii) conclusion of phytosanitary stakeholder assessment, capacity evaluation and prioritization (ENPSP Activity 1.2), (iii) mobilization of interministerial phytosanitary taskforce (ENPSP Activity 1.3), (iv) commencement of awareness raising activities (ENPSP Activity 1.4); (v) development of Draft Plant Protection Law and Draft Phytosanitary Regulation (ENPSP Activities 1.5 and 1.6) and (vi) training needs assessment and curriculum selection for phytosanitary inspection service staff (ENPSP Activity 1.7), TA Phytosanitary Law Specialist and MAFCRD Plant Protection Department prepare detailed design and tender documentation for offices, mini-labs, staff housing and any other accommodation requirement for phytosanitary border inspection posts. (Year 1, = Year 2 of ENPSP).</p> <p>Output 1.1: Detailed design specification for office accommodation and other requirements for four phytosanitary border inspection posts at Nimule, Nadapal, Kaya and Juba airport (including furnishings and equipment).</p> <p>Activity 1.2: Conduct tender process and let contracts for construction and equipping of agreed phytosanitary inspection posts, to be completed immediately following</p>
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⁵⁷ Ideally such revenue should be utilized to cover consumable costs of the service provided.

⁵⁸ http://www.wto.org/english/thewto_e/whatis_e/tif_e/org6_e.htm

Items	Information
	<p>training in regional centre of excellence (COPE/KEPHIS), (carried out under ENPSP Activity 1.8) and ready for inception of phytosanitary service and in-service on-the-job training and mentoring of staff allocated to central office and border posts (ENPSP Activity 1.11). (Year 1, = Year 2 of ENPSP).</p> <p>Output 1.2: Completion reports for construction of phytosanitary facilities. Phytosanitary facilities operational and staffed.</p> <p>Component 2: Develop infrastructure for a national plant pest and disease diagnostic facility.</p> <p>Activity 2.1: Based on completed needs assessment conducted under ENPSP (ENPSP, Activity 2.1) and dependent on assignment of suitably qualified and trained staff by MAFCRD (ENPSP, Outputs 2.2, 2.3) TA International Plant Pathogen Diagnostic Specialist and National Plant Pathology Specialist prepare design for plant pest and disease diagnostic laboratory infrastructure (including office and laboratory facilities, staff housing, equipment and consumable supplies). (Year 2, = Year 3 of ENPSP)</p> <p>Output 2.1: Design specification for tendering of all infrastructure and equipment (including delivery to site and commissioning of all equipment with initial training on equipment use and provision of maintenance agreements).</p> <p>Activity 2.2: Conduct tender process and let contract for construction of agreed diagnostic laboratory facility (Year 2, = Year 3 of ENPSP).</p> <p>Outputs 2.2: Contract documents, building completion reports. Building for lab. ready for use.</p> <p>Activity 2.3: List, procure, install and commission equipment and initial consumable supplies for diagnostic services, according to needs determined under ENPSP (ENPSP, Activity 2.1). (Year 2, = Year 3 of ENPSP).</p> <p>Outputs 2.3: Lists of laboratory equipment to be procured (see partial indicative listing in Annex 2); reports of commissioning of equipment and summaries of diagnostic reports produced based on use of the facilities, in response to identification requests serviced. Lab. fully operational.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	Service providers will include International and regional TA providers, locally recruited construction companies, subject matter specialists of MAFCRD, especially the Research Directorate and Plant Protection Department and university staff.
(2) Description of beneficiaries within the framework of the project:	Initial beneficiaries will be: (i) staff of the MAFCRD provided with facilities within which to conduct phytosanitary inspections and pest and disease diagnoses; (ii) importers and exporters provided with clear and transparent instructions on phytosanitary requirements. The ultimate beneficiaries will be the nation and people of South Sudan whose food sovereignty and food security will be enhanced by reduction of phytosanitary threats to national crop production as a result of regulation of entry of agricultural produce at border crossing points, and correct diagnosis and regulatory actions against entry and establishment of exotic plant pests and diseases.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<p>The main outcomes of the project will be:</p> <ul style="list-style-type: none"> • Legitimate trade in agricultural produce between South Sudan and its southern neighbours will be regulated and facilitated by a legally constituted national phytosanitary inspection service operating at the southern borders and the main international airport; • Crop pests and diseases intercepted at border checkpoints or reported by farmers or researchers will be reliably identified and the associated risks they pose for national food security will be analysed and managed. <p>The impact will be that South Sudan's food sovereignty and food security will be enhanced by reduction of phytosanitary threats to production.</p>
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: a Positive: c</td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: a Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: a Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • Construction of border posts and diagnostic laboratory will have minor negative environmental impacts mainly during the construction phase, but these should be temporary and reversible and can be mitigated by careful siting and following appropriate environmental standards for small-scale construction projects⁵⁹. 		

⁵⁹ See, for example: USAID, 2014. *Sector Environmental Guidelines, Small-Scale Construction*. 39 pp.

Items	Information
	(Positive) <ul style="list-style-type: none"> The creation of phytosanitary inspection posts and diagnostic laboratory is likely to have a positive social impact because imported plant materials will be screened and therefore in the medium term will be less likely to introduce new pest and disease problems which would cause both social and environmental impacts.

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> Number and size (and %) of consignments of imported plant materials subjected to phytosanitary screening (and sampling) in previous year. Number and size (and %) of consignments of imported plant materials found to contravene phytosanitary regulations in previous year. Number of consignments of export produce receiving certification in previous year. Number of plant pests and disease samples submitted for formal identification to specialists in-country in previous year. Number of plant pests and disease samples submitted for formal identification to specialists outside South Sudan in previous year. Number of virus diseases for which laboratory diagnosis can be undertaken in South Sudan.
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> Number and size (and %) of consignments of imported plant materials subjected to phytosanitary screening (and sampling) in previous year. Number and size (and %) of consignments of imported plant materials found to contravene phytosanitary regulations in previous year. Number of plant pests and disease samples submitted for formal identification to specialists in-country in previous year. Number of plant pests and disease samples submitted for formal identification to specialists outside South Sudan in previous year. Number of virus diseases for which laboratory diagnosis can be undertaken in South Sudan. Number of samples submitted for pest and disease laboratory diagnosis in previous year.
(3) Methods of measurement and sources of information:	Statistical summaries from official records and reports of phytosanitary inspection service. Statistical summaries from official records and reports of the phytosanitary diagnostic laboratory
(4) Responsible parties for the monitoring and evaluation:	MAFCRD Plant Protection Department; M & E officials of MAFCRD (if any); external evaluators appointed by development partners.

2.7 Required human resources

(1) Principle of human resources management:	Short-term technical assistance will be provided to develop the design specification for procurement of the necessary infrastructure and associated equipment and initial consumable supplies for phytosanitary inspection posts and for a national phytosanitary diagnostic service laboratory, with the advice of a small pest and disease diagnostics expert panel composed of South Sudanese MAFCRD and university staff. Construction and provision of equipment and supplies will be tendered.
(2) Required human resources in the public sector (Positions, grades and numbers):	The required human resources for development of phytosanitary infrastructure include a small expert panel on pest and disease diagnostics composed of South Sudanese MAFCRD and university staff which will meet with the international TA Plant Pathogen Diagnostics Specialist to review the needs for diagnostic services, the specific design of the diagnostic laboratory and the requirements for equipment and consumables for entomology, plant pathology and virology.
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<ul style="list-style-type: none"> International TA phytosanitary law senior specialist (advanced degree, 15 years phytosanitary / legal experience, preferably partly in Africa) one (<u>already recruited and budgeted under ENPSP</u>). International TA plant pathogen diagnostics specialist (advanced degree, 15 years experience) one, National TA junior legal specialist (law degree, 5 years experience) one South Sudanese national with experience of legislation projects (<u>already recruited and budgeted under ENPSP</u>). National plant pathologist (MSc or PhD, ten years experience) one

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	M L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	The main risk in relation to creation of phytosanitary infrastructure will be from delays in handling of draft legislation by ministerial committees and parliament which may prevent the attainment of the major legislative outcomes (Acts and Regulations) within the lifetime of the project. Development partners wishing to finance the NPIP and the ENPSP should seek assurances at the highest level before entering into financing commitments. It is essential that infrastructure and training activities are carefully phased to follow passage into law of the enabling legislation, to avoid expenditure on infrastructure and capacity that will never be used for its intended purpose. Any programme involving placing staff and facilities at border posts carries the risk of loss

Items	Information
	or damage due to civil unrest. In particular for the time being it is not practicable to place staff at or near the northern border with Sudan. There is also a significant risk that staff will be unwilling to be posted to small communities situated at or near borders. Provision of transport (motorbike with fuel allowance) would enable staff to commute to their place of work from the nearest suitable town ⁶⁰ .

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:

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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.

<p>The phytosanitary border post facilities will require continuing provision of water, power supply, security, and renewable supplies for office functions and sampling. Minor repairs and maintenance of the structures of the border posts and a small central office will also be needed periodically.</p> <p>The diagnostic laboratory will require continuing provision of water, power supply, security, maintenance contracts for equipment and renewable supplies for tests.</p>

⁶⁰ Note that two vehicles, originally provided to MAFCRD for seed inspection under the Support to Agriculture and Forestry Development Project are said to be available for phytosanitary activities. See footnote 16.

Annex 1: Republic of South Sudan. Proposed Border Check Points for Sanitary and Phytosanitary Control

S/N	Check point	County	State	Country & Administrative area bordered	Priority for Livestock sanitary control	Priority for Phytosanitary control
1	KajoKeji	KajoKeji	Central Equatoria State	Bordering Moyo / Uganda	Yes	
2	Kaya	Morobo		Bordering Koboko / Uganda Bordering Aliwara / Congo DRC	Yes	Yes
3	Lasu	Yei		Bordering Aba / Congo DRC		
4	Nadapal	Kapoeta East	Eastern Equatoria State	Bordering Lokichokio / Kenya	Yes	Yes
5	Nimule	Magwi		Bordering Atiak / Uganda	Yes	Yes
6	Tsertanya	Ikotos		Bordering Karamoja / Uganda		
7	Ezo	Ezo	Western Equatoria State	Bordering Dingu / Congo & DRC	Yes	
8	Nabiapai	Yambio		Bordering Banda / Congo DRC		
9	South Yubo	Tambura		Bordering Bambouti / Central Africa Republic		
10	Warguet / War-awar	Aweil East	Northern Bahr El-Ghazal State	Bordering Southern Kordufan / Sudan	Yes	Yes ⁶¹
10a	Marial-baai	Aweil West		Bordering Southern Kordufan / Sudan	No	Yes, but see footnote ⁶²
11	Kiir Adem / Gok Machar	Aweil North		Bordering Southern Darfur / Sudan	Yes, but see footnote 2	
12	Kafia Kanji / Timsaha	Raja	Western Bahr El-Ghazal State	Bordering Southern Darfur / Sudan		Yes, but see footnote 2
13	Boro	Raja		Bordering Southern Darfur / Sudan		Yes, but see footnote 2
14	Abyei	Abyei	Warrap State	Bordering Southern Kordufan / Sudan		See footnote
15	Abiemnhom	Abiemnhom	Unity State ⁶³	Bordering Southern Kordufan / Sudan		
16	Jau / Karsana	Pariang		Bordering Southern Kordufan / Sudan	Yes	Yes, but see footnote 2

Annex 1 (continued): Republic of South Sudan. Proposed Border Check Points for Sanitary and Phytosanitary Control

S/N	Check point	County	State	Country & Administrative area bordered	Priority for Livestock sanitary control	Priority for Phytosanitary control
17	Joda	Renk	Upper Nile State ⁶⁴	Bordering White Nile State / Sudan	Yes, but see footnote ²	
18	Magenis / Wedakona	Manyo		Bordering Southern Kordufan / Sudan		
19	Kaka	Fashoda		Bordering Southern Kordufan / Sudan	Yes, but see footnote ²	
20	Maban	Maban		Bordering Blue Nile State / Sudan	Yes, but see footnote ²	
21	Dajo	Longochuk		Bordering Ethiopia		
22	Jikou	Maiwut		Bordering Ethiopia		
23	Nasser	Nasser		Bordering Ethiopia	Yes	
24	Ajwara	Pochala	Jonglei State ⁶⁵	Bordering Gambela region / Ethiopia		
25	Akobo	Akobo		Bordering Gambela region / Ethiopia	Yes	
26	Boma	Pibor		Bordering Dima region /		

⁶¹ War-awar is the main market in the area, a major trading point. Marielbay has also been suggested for phytosanitary control, but is of lesser importance.

⁶² Abyei is a contested area, currently partly controlled de facto by Sudan, and much of the border with Sudan is insecure. Hence it will be difficult to operate any SPS facility along this border (with the possible exception of War-awar) until these disputes are settled. See: http://www.polgeonow.com/2012/05/feature-sudan-south-sudan-border_26.html

⁶³ Panthou (Higli) and Abu Jabir have also been proposed as phytosanitary border posts. However it is not clear that this would not be duplication of the existing proposed sites.

⁶⁴ Pagak has also been proposed as a phytosanitary border post. However it is not clear that this would not be duplication of the existing proposed sites.

⁶⁵ Rart has also been proposed as a phytosanitary border post. However it is not clear that this would not be duplication of the existing proposed sites.

				Ethiopia		
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Annex 2. Indicative equipment needs for diagnostic laboratory

Inventory of Equipment purchased under Great Lakes Cassava Initiative sub contract to UK FERA and installed at KEPHIS

(Source: Dr Julian Smith, FERA, personal communication).

Equipment	Supplier	Part No.	Quantity	Unit Price (UK£)	Carriage	Total	Total Price (UK£) inc VAT
Genogrinder	Spex CertiPrep	2010-230/01	1	9,885	50	9,935	11,922
KingFisher mL magnetic particle processor	Thermo	5400050	2	9,887	112	19,886	23,863
Incubator (e.g. Hybaid)	VWR	Hybaid 6240	1	3,490		3,490	4,188
Micro centrifuge	Sigma	1-14 Microfuge	2	775	20	1,570	1,884
Sigma Bench top centrifuge	SciQuip	4-16K	1	6,129	100	6,229	7,474
Rotor for plates	Qiagen	81031	1	1,341	50	1,391	1,669
Multichannel pipettes (5 -100ul) adjustable volume	BioHit	NA	2	392		784	941
Pipette 0.5 - 10	BioHit	NA	2	127		254	305
Pipette 10 - 100	BioHit	NA	2	119		238	285.6
Pipette 20 -200	BioHit	NA	2	119		238	285.6
Pipette 100 - 1000	BioHit	NA	2	119		238	286
Vortex mixer	Grant Bio	NA	2	142		284	341
Multi-stepper	Thermo	NA	2	138	13	289	347
Mini centrifuge	Sprout® Mini-Centrifuge	NA	1	105		105	126
							53,917

Note that for the purpose of equipping a diagnostic laboratory in South Sudan, the items and prices listed above are purely indicative and no liability is accepted for any errors or omissions. Laminar flow hoods and a range of less specialised laboratory equipment will also need to be provided, including refrigerators, freezers, protective clothing, glassware, reagents and disposable items and consumables.

2.4.31 Establishment of a national phytosanitary system project

Items	Information		
Part 1: Project profile administration			
1.1 Project identification			
(1) Subsector	Crop		
(2) Project name	Establishment of a national phytosanitary system project		
(3) Project ID:	0	1	3 1
(4) Start and ending fiscal year:	Starting FY: 2015/16	Ending FY: 2018/19	Duration (years): 4
(5) Total investment:	SSP 5,815,000	USD 1,454,000	Note: Not including recurrent cost
(6) Name of this file (automatic):			
1.2 Project characteristics			
(1) Subsector area:	SA1		Policy and Legal Framework Development
(2) Government organisation:	09	MAF-PP	Department of Plant Protection ⁶⁶
	13	MAF-AE	Directorate of Planning and Agricultural Economics
	01	MAF-AF	Directorate of Administration and Finance
(3) Activity types:	101	ID-LI	Institutional Development - Legal and Institutional Development
	102	ID-AD	Institutional Development – Administrative Capacity Development
	207	SP-PL	Service delivery and infrastructure development – Granting permissions and licenses
1.3 Project characteristics:			
(1) Development theme:	Code	Abbreviation	Description
	01	RR	Reconstruction and recovery
	02	FS	Food and nutrition security
	03	EG	Economic growth and livelihood improvement
	04	AT	Agriculture sector transformation
	05	ID	Institutional development
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management
	02	CAADP-P2	Pillar 2: Market access
	03	CAADP-P3	Pillar 3: Food supply and hunger
	04	CAADP-P4	Pillar 4: Agricultural research
(3) State:	71	UN	Upper Nile State
	72	JG	Jonglei State
	73	UT	Unity State
	81	WA	Warrap State
	82	NB	Northern Bahr el Ghazal State
	83	WB	Western Bahr el Ghazal State
	84	LK	Lakes State
	91	WE	Western Equatoria State
	92	CE	Central Equatoria State
	93	EE	Eastern Equatoria State
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)
	02	MT	Medium-term (5 to 10 years)
	03	LT	Long-term (more than 10 years)
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)
	02	PH2	Phase II (2020/21-2024/25, 5 years)
	03	PH3	Phase III (2025/26-2029/30, 5 years)
	04	PH4	Phase IV (2030/31-2039/40, 10 years)
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains
	02	GBT	Greenbelt
	03	HAM	Hills and Mountains
	04	ISP	Ironstone Plateau
	05	NSR	Nile-Sobat Rivers
	06	PTL	Pastoral
	07	WFP	Western Flood Plains
(7) Ownership:	01	NP	National project
	02	NS	National-State project
	03	SP	State project
	04	SC	State-County project
	05	PP	Public-Private Partnership project
	06	PS	Private sector project
(8) Funding sources:	11	NBF	National government budget/development fund
	12	NLE	National government loans and equity financing
	21	SBF	State government budget/development fund
	22	SLE	State government loans and equity financing
	31	DPG	Development partners grant
	32	DPL	Development partners loans and equity financing
	41	PSI	Private sector Investment
	51	NGG	NGO grant
	52	NGL	NGO loans and equity financing
	61	FGI	Financed by generated income

⁶⁶ The Plant Protection Department is not currently officially approved as a Directorate (November 2014).

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

Approximately 78% of households in South Sudan are engaged in agriculture⁶⁷, the majority of whom are subsistence farmers who cultivate crops for home consumption. Pests and Diseases have been identified as the highest constraint (21% of all constraints) on crop production⁶⁸. Satti (2011⁶⁹) listed 26 non-native insects of economic importance which have invaded Sudan (including areas now in South Sudan), mostly as a result of unregulated movements of infested plant material and he identified a further ten species of quarantine pests posing an imminent threat of establishment.

Many new invasive pests⁷⁰ have either already entered South Sudan in recent years, or are expected to gain access in the immediate future (e.g. several exotic fruit fly pests, larger grain borer, maize lethal necrosis disease, cassava brown-streak viruses, banana xanthomonas wilt). Each of these pests can cause serious economic production losses on impacted crops. In Kenya, maize lethal necrosis disease (MLND) has become a significant threat to national food security in just two years, with the 2014-15 long rains maize crop expected to be as much as 30% below the five-year national average of 2.7 million metric tons, due to below-average rains and losses to MLND⁷¹, which have affected 70% of maize farmers.

Unregulated large-scale movements of food grains and cassava from Uganda and Kenya into South Sudan undertaken by relief agencies have substantially increased the risk of such accidental introductions. Mass movements of refugees fleeing from conflict zones, or subsequently returning to their home areas, are also a potential cause of accidental plant pest and disease introductions.

In late 2014 Southern Sudan acceded to the International Plant Protection Convention (IPPC). Under the IPPC rules the primary responsibility for phytosanitary regulation rests with the National Plant Protection Organization (NPPO), currently the Plant Protection Department (PPD) of MAFCRD⁷². Contracting parties are expected to exercise phytosanitary controls at national borders, to maintain up-to-date lists of regulated plant pests known to occur within their territories and to conduct surveillance to support non-records of occurrence as a basis for their quarantine regulations. Absence of such systems is recognised as a key constraint in negotiations on trade.

There is no current phytosanitary regulation in force in South Sudan and no national pest database. The previous Sudanese plant protection legislation, itself outdated and unfit for purpose, has not been applied in South Sudan. However Central Equatoria State has been using phytosanitary documentation based on Sudanese law. No national or state government phytosanitary personnel are currently monitoring the borders of South Sudan and no Ugandan phytosanitary staff have yet been posted to Uganda's border with South Sudan⁷³.

MAFCRD's Plant Protection Policy⁷⁴ is composed of six policy statements which include (No 2) "*Facilitate the establishment and promotion of plant protection industry to ensure access to appropriate plant protection materials and services*". However, there is currently no regulation for pesticides or other agro-chemicals in South Sudan. Use of pesticides has been discouraged by MAFCRD and no approved list has been gazetted. Input suppliers are not formally registered to sell pesticides, although a very restricted range of older pesticides is currently available in major towns. Informally, only MAFCRD is permitted to hold fumigation chemicals and to carry out fumigation. In this legislative vacuum, Central Equatoria State has prepared its own draft bill to regulate pest control products⁷⁵. This should not be finalized until a national act or regulation has been gazetted which should then guide state legislation.

⁶⁷ NBS. 2012. *National Baseline Household Survey 2009*. p. 53.

⁶⁸ WFP / FAO / MAF. 2006. quoted in African Development Bank, 2013. *South Sudan: An Infrastructure Action Plan - A Program for Sustained Strong Economic Growth - Chapter 6 - Development of Agriculture in South Sudan*.

⁶⁹ Satti, A.A. 2011. Alien insect species affecting agriculture and natural resources in Sudan. *Agric. Biol. J. N. Am.*, 2011, 2(8): 1208-1221. <http://scihub.org/ABJNA/PDF/2011/8/ABJNA-2-8-1208-1221.pdf>

⁷⁰ The IPPC defines a pest as "any species, strain or biotype of plant, animal or pathogenic agent injurious to plants or plant products". The understanding of the term "pests" includes organisms that are pests because they directly affect cultivated/managed or uncultivated/unmanaged plants, indirectly affect plants, or indirectly affect plants through effects on other organisms (c.f. Annex 1 of ISPM 11:2004).

⁷¹ <http://www.fews.net/east-africa/kenya/food-security-outlook/october-2014>

⁷² <https://www.ippc.int/countries/south-sudan>. The Plant Protection unit is currently a Department, but the Plant Protection Policy, approved by the Minister but still to be approved by Parliament, calls for it to be upgraded to a Directorate.

⁷³ Commissioner for Crop Inspection and Certification, Uganda, personal communication, November 2014.

⁷⁴ Approved by the Minister but still awaiting Parliamentary approval (as at November 2014).

⁷⁵ "*The Seeds and Pest Control Products Control Order (Bill)*". Undated draft. Central Equatoria State Ministry of Agriculture. 3 pp.

Items	Information
	<p>MAFCRD is acutely aware of the vulnerability of South Sudan to the ingress of invasive species by infected or infested plant materials but currently lacks capacity and resources to develop the necessary regulatory apparatus. The MAFCRD Draft Research Policy includes ten policy statements, of which No 2 is: "Ensure reduction of losses caused by pests and diseases in crops, livestock, fisheries and forestry". Six implementation strategies are identified, including programmes for the introduction, breeding, developing and promoting of pest and disease resistant varieties and strains; promotion of utilization of biological control agents; and development and promotion of the use of safe chemical pesticides. These are clearly appropriate strategies, but introduction of new plant varieties, biological control agents and development of safe chemical pesticides all require a regulatory framework to be set up to ensure the safety of farmers, consumers of produce and the environment.</p> <p>MAFCRD's Plant Protection Policy Statement No 6 calls for "Control and prevention of entry into the country of diseases and pests, contaminated seeds and planting materials". MAFCRD has recently developed the first draft of a National Plant Protection Act. This is still incomplete, requiring a greater degree of detail and stronger linkages to the Constitution of South Sudan and to relevant international conventions (the World Trade Organization Agreement on Application of Sanitary and Phytosanitary measures, the International Plant Protection Convention, the Codex Alimentarius, and the International Chemical Conventions).</p> <p>There is at present no diagnostic laboratory facility or national capacity to provide diagnostic services for insect and other invertebrate pests and for plant diseases caused by fungi, bacteria, viruses and other microbial pathogens. Field diagnosis of virus diseases based on visual recognition of foliage symptoms is unreliable and in the case of seed or cutting materials is inapplicable. The only definite diagnoses of plant viruses collected on the territory of South Sudan have been achieved by sending samples abroad for identification using polymerase chain reaction (PCR) techniques which detect and amplify viral DNA and RNA. FAO has sent samples of infected maize to the UK Food and Environment Research Agency (FERA), in 2014, free of charge, for diagnosis of maize viruses, but any future consignments are expected to be charged at normal commercial rates. In 2013 AGRA provided for samples of cassava to be sent to the Cassava Regional Center of Excellence at the National Crops Resources Research Institute (NACCRI), Namulonge, Uganda for identification of cassava mosaic virus and cassava brown streak viruses.</p>
(2) Objectives:	<p>To create a National Phytosanitary regulatory system for South Sudan, backed by law and regulations compliant with international conventions⁷⁶ and best practice, to:</p> <ul style="list-style-type: none"> • protect human, animal or plant life or health within the territory of South Sudan from risks arising from the entry, establishment or spread of plant pests, plant diseases, plant disease-carrying organisms or plant disease-causing organisms; • prevent or limit other damage within the territory of South Sudan from the entry, establishment or spread of pests. • protect human, animal or plant life or health within the territory of South Sudan from risks arising from importation of chemical and biological pesticides and biocontrol agents, while enabling farmers adequately to protect their crops and stored produce from pests and diseases. • facilitate compliance with international and regional phytosanitary requirements by plant products exported from the territory of South Sudan.
(3) Overall description including temporal and spatial extent of project:	<p>Legislative framework and regulations for plant protection</p> <p>The proposed project will create an overall legislative framework for plant protection, establishing the legal role of the Minister of Agriculture in oversight of the areas of phytosanitary control and pesticide regulation. It will draft regulations covering:</p> <ul style="list-style-type: none"> • Phytosanitary control of imports and exports of plants and plant products (including seeds) • Regulation of importation, labelling, storage, use and disposal of pesticides, with early promulgation of an interim register of pesticides approved for importation and use⁷⁷. • Creation of a pesticide registration body and the position of Pesticide Registrar. • Registers and licensing system for agro-dealers permitted to import pesticides and for public and commercial fumigation service providers. <p>Phytosanitary regulation</p> <p>Phytosanitary inspection and regulatory actions need to be consistent with the</p>

⁷⁶ Items a to d have been extracted, with the exclusion of reference to animal diseases, from the WTO SPS Agreement's definition of an SPS measure.

⁷⁷ Regulatory system for pesticides should be compliant with The International Code of Conduct on Pesticide Management (2013). See: http://www.fao.org/fileadmin/templates/agphome/documents/Pests_Pesticides/Code/CODE_2014Sep_ENG.pdf

Items	Information
	<p>requirements of the IPPC and World Trade Organization (WTO) Agreement on Sanitary and Phytosanitary Measures (“the WTO SPS Agreement”)⁷⁸ and in harmony with recent legislation in neighbouring countries within the region covered by the African Union Inter-African Phytosanitary Council (AU-IAPSC). The detailed requirements for a phytosanitary import regulatory system provided in ISPM 20⁷⁹ should be followed. The basic structure of a Phytosanitary Law has been set out by Vapnek & Manzella (2007)⁸⁰. The draft law/regulation will need to take account of national government policy with regard to genetically-modified organisms, referred to as living modified organisms (LMOs).</p> <p>Phytosanitary regulations should be made no more restrictive than is necessary to ensure protection of human, animal, and plant life or safety, or environmental protection. They should be based on the risks associated with noncompliance, which should be assessed according to available scientific and technical information, and the intended end uses of products. They should also follow recommendations of the <i>International Convention on the Harmonization of Frontier Controls of Goods (UNECE 1982)</i> which aims to facilitate the cross-border exchange of goods by harmonizing and reducing formalities, as well as the number and duration of border controls.</p> <p>A project component for this purpose will include technical assistance visits by an experienced international phytosanitary legal consultant to prepare a draft bill and regulations. Development of phytosanitary controls needs to include participation by representatives of organizations involved in sanitary controls for livestock, standards for foodstuffs (Bureau of Standards), the national airports authority, customs revenue and trade, as well as MAFCRD’s PPD, subject matter specialists in universities⁸¹, representatives of private sector trade bodies (e.g. Chambers of Commerce) and international organizations involved in crop protection with offices in South Sudan such as FAO. A national inter-ministerial working group will therefore be convened to review and validate draft legislation.</p> <p>Phytosanitary regulation will be best developed in close liaison with the phytosanitary services of neighbouring countries who should be invited to comment on draft legislation. Attendance at regional meetings convened by the AU-IAPSC and the IPPC may be financed for some senior staff to foster this cooperation.</p> <p>Phytosanitary service</p> <p>A functioning phytosanitary service will need to have national government agreement to finance the salaries and work of inspectors at the border posts. This will include provision of accommodation or housing allowances. A prioritized inventory of border crossing points should be agreed, based on those already tentatively proposed as sanitary control points for livestock inspection⁸². For phytosanitary purposes the immediate priority is a pilot system which can be brought into operation at the southern borders with Congo, Uganda, and Kenya. A phytosanitary office should also be created in Juba airport.</p> <p>The infrastructure needed for phytosanitary inspection posts will be created under CAMP by a companion project: the “<u>National phytosanitary infrastructure project</u>”. Border post structures, originally intended for seed inspection, have already been created at Nimule, Nadapal and Kaya, through Dutch (Netherlands) government funds provided through the Support to Agriculture and Forestry Development Project (SAFDP) as support to the seed sector⁸³. These facilities need to be reviewed as to their suitability in the phytosanitary infrastructure project.</p> <p>Most border phytosanitary checks should be administrative, carried out by reference to required documentation (Import permit, Phytosanitary Certificate). After a suitable grace period, during which awareness raising activities would be conducted at border posts, entry of any consignment lacking appropriate phytosanitary documentation would be prohibited and the consignment refused, fumigated or destroyed. Since there are no facilities for post-entry quarantine and no capacity at present to destroy consignments,</p>

⁷⁸ WTO, 1994.

⁷⁹ International Standards for Phytosanitary Measures. ISPM 20. *Guidelines for a Phytosanitary Import Regulatory System* (2004). Secretariat of the International Plant Protection Convention, FAO, Rome. 20 pp.

⁸⁰ Jessica Vapnek and Daniele Manzella. 2007. *Guidelines for the Revision of National Phytosanitary Legislation*. FAO Legal Papers Online #63. January 2007. FAO, Rome. 38 pp. www.fao.org/fileadmin/user_upload/legal/docs/lp063.pdf

See Box 2 for a skeleton outline and the appendix for the main provisions of a phytosanitary law, and links each to the articles/sections of the WTO/SPS, the IPPC and the ISPMs which are most relevant.

⁸¹ Principally Juba University and Dr John Garang Memorial University of Science and Technology.

⁸² Twenty six crossing points for sanitary control have been proposed by the CAMP livestock technical team. These are listed in “National phytosanitary infrastructure project”.

⁸³ See: World Bank, 2013. Implementation Completion and Results Report (TF-91282, TF-93011) on Grants in the Amount of US\$ 30.2 Million to the Government of Southern Sudan for a Support to Agriculture and Forestry Development Project. May 31 2013. Three vehicles were also provided to the seed project. Two of these are said to be available to the phytosanitary service (Cirino Oketayot, Director-General Research, personal communication) but this needs to be verified.

Items	Information
	<p>refusal of entry may be the preferred option for consignments of seed (or cuttings) intended for planting of food crops of national food security significance such as maize and cassava.</p> <p>Pest Risk Analysis (PRA) Pest risk analysis provides the rationale for phytosanitary measures for a specified PRA area. It evaluates scientific evidence to determine whether an organism is a pest. If so, the analysis evaluates the probability of introduction and spread of the pest and the magnitude of potential economic consequences in a defined area, using biological or other scientific and economic evidence. If the risk is deemed unacceptable, the analysis may continue by suggesting management options that can reduce the risk to an acceptable level. Subsequently, pest risk management options may be used to establish phytosanitary regulations.</p> <p>The pest risks posed by the introduction of organisms associated with a particular pathway, such as a commodity (e.g. maize grain, cassava cuttings), should also be considered in a PRA. The commodity itself may not pose a pest risk but may harbour organisms that are pests (e.g. stored products pests, seed-borne diseases). Lists of such organisms are compiled during the initiation stage. Specific organisms may then be analysed individually, or in groups where individual species share common biological characteristics⁸⁴.</p> <p>Pest risk analyses (PRAs) need to be undertaken as soon as possible for highest priority commodities (maize, cassava, sorghum, rice⁸⁵) and the diseases of quarantine concern most likely to be accidentally introduced. For example these should include maize chlorotic mottle virus (MCMV), one of the causative agents of maize lethal necrosis disease in maize, which is not endemic in South Sudan. A risk assessment is also needed for cassava brown streak viruses (CBSVs) which may only be present in parts of Greater Equatoria and whose further spread should be prevented. In both cases the results of PRAs are likely to provide justification for a recommendation that certificates of origin should be required for all imports of seed (or cuttings) intended for planting. The Ministry of Agriculture in Uganda can supply such certificates for exporters of material raised in certified “mother gardens”⁸⁶.</p> <p>Pest and disease diagnostic laboratory facilities In view of the phytosanitary threats posed by invasive plant diseases, especially viruses, there is a need to develop national capacity to undertake plant virus diagnoses in South Sudan, rather than relying on diagnostic centres in countries which may themselves be exporting virus-infected planting materials to South Sudan. Creation of a laboratory diagnostic capability to identify pests and diseases associated with samples (intercepted at borders) of crops and stored produce⁸⁷ will be a component of this project. The laboratory infrastructure needed for this facility will be created under CAMP by a companion project: the “National phytosanitary infrastructure project”.</p> <p>Pesticide regulation and management system A normative scheme for regulation of pesticide management is provided in Annex 1. The project component for this purpose will include technical assistance visits by an experienced international consultant to prepare the draft regulation and to facilitate the process of preparing a provisional list of permitted pesticides, licensing of importers and wholesalers of pesticides and licensing of fumigation service providers. Licensing of fumigators should meet standards set out in APPC, (2014)⁸⁸, or similar FAO standards and the methods approved and taught should comply with the requirements of the World Food Programme (WFP)⁸⁹.</p> <p>A national stakeholder working group will be convened to review and validate draft legislation. Development of a pesticide regulatory system needs to include participation by representatives of organizations involved in large-scale farming, the smallholder subsector, the Environment Ministry, Bureau of Standards and representatives of the private sector input suppliers in addition to MAFCRD’s PPD, subject matter specialists in universities and representatives of international organizations involved in crop protection</p>

⁸⁴ Secretariat of the International Plant Protection Commission (IPPC). 2011. *International Standards for Phytosanitary Measures. ISPM 2. Framework for pest risk analysis.* (2007). 18 pp.

⁸⁵ This is not a prescriptive list. For example, fresh fruit and planting material of banana also need risk assessments because of the dangers of importing exotic fruit flies and xanthomonas wilt, respectively.

⁸⁶ Commissioner for Crop Inspection and Certification, Uganda, personal communication, November 2014

⁸⁷ Such a diagnostic laboratory facility is also required for the “National crop pest and disease management project” and for support to ongoing crops research by MAFCRD’s Directorate of Research.

⁸⁸ The Asia and Pacific Plant Protection Commission (APPPC), 2014. *Regional standards for phytosanitary measures. Approval of Fumigation Facilities.* FAO Regional Office for Asia and the Pacific, Bangkok, 2014. www.fao.org/docrep/019/i3708e/i3708e00.htm

⁸⁹ <http://documents.wfp.org/stellent/groups/public/documents/reports/wfp250916.pdf>

Items	Information
	<p>with offices in South Sudan such as FAO.</p> <p>While formulating pesticide legislation, to avoid delay in meeting farmers' needs there is a need to prepare and approve a provisional list of relatively low toxicity pesticide products (insecticides, fungicides and herbicides) which may be imported now and made available to farmers through existing agro-dealers, as well as a few restricted use chemicals reserved for use by licensed applicators (e.g. fumigants). This list should be issued by the Minister of Agriculture as either an administrative order or a ministerial decree, pending approval by Parliament.</p> <p>The international TA specialist will prepare a proposal for South Sudan to accede to the relevant international Pesticide Conventions⁹⁰. The secretariats of these Conventions have funding available to assist developing country members to improve their compliance with the conventions and to improve their governance of pesticide safety issues such as persistent organic pollutants (POPs) and the Prior Informed Consent Procedure (PIC), which allows signatories to monitor and control the international trade of certain dangerous pesticides.</p> <p>Enhancing private sector performance and compliance</p> <p>As well as registering dealers and requiring them to meet minimum standards, it will be desirable to encourage the formation of an agro-input suppliers association for South Sudan. Some assistance has previously been provided (through development partners) to agro-input dealers in South Sudan to enable them to supply services (mainly seeds) of an appropriate quality to meet normal regulatory standards. For provision of pest management inputs, there is also a need for agro-dealers to increase their awareness of safety needs and to offer protective clothing for sale as well as reliable spraying equipment and good quality pesticides. They also need to upgrade their advice at point of sale to inform semi-literate or illiterate farmers about correct dosage and safety issues and to refer their clients to any available extension advice such as the plant clinics proposed under the "<u>National crop pest and disease management project</u>".</p> <p>A training course will be developed for pesticide importers, wholesalers and retailers covering the provisions and requirements of the Draft South Sudan Pesticide Regulation and International Code of Conduct for pesticide management (e.g. management of pesticide stocks, personal protective equipment, spraying equipment minimum requirements, permitted pesticide types and hazard classes, and requirements for provision of advice to semi-literate or illiterate clients about correct dosage and safety issues, etc).</p> <p>Separate training courses, with an element of training of trainers (ToT) will be designed and implemented to equip public (i.e government) and commercial fumigation service providers to utilize restricted-use fumigant pesticides safely to treat stored grain in warehouses. Skills of selected government plant protection staff will be refreshed and upgraded to be able to continue to provide similar training as a basis for certifying fumigation service providers post-project.</p> <p>An agrochemical suppliers' association would be the primary private sector partner to interact with the national government on policy and regulatory issues related to seed, fertilizers and pesticides. Such an association, which could be affiliated to CropLife Africa Middle East⁹¹, with an appropriate code of conduct and training programme, could help to set minimum good practice standards within the industry. It would propose new plant protection products for certification and would also be able to lobby the national government to discourage sales of chemicals in markets and to take action against illegal, obsolete or fake pesticides being brought into the country. It is desirable that assistance to the private agro-input sector is coordinated with government policy. This project provides an opportunity to involve both governmental regulators and private sector service providers in raising standards.</p> <p>Temporal extent and sustainability</p> <p>The "<u>Establishment of a national phytosanitary system project</u>" (ENPSP) is expected to have a duration of four years. This corresponds with the typical timeline for most projects funded by development partners. This short duration emphasizes that this project has closely-defined aims and its outputs needs to be put in place with all possible speed to</p>

⁹⁰ The *Codex Alimentarius*, and more specifically the Codex Committee on Pesticide Residues, operational since 1966; The *Montreal Protocol on Substances that Deplete the Ozone Layer*, adopted in 1987 and entered into force in 1989, and its subsequent amendments; The *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal*, adopted in 1989 and entered into force in 1992; The *Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade*, adopted in 1998 and entered into force in 2004; The *Stockholm Convention on Persistent Organic Pollutants*, adopted in 2001 and entered into force in 2004.

⁹¹ http://www.croplifeafrica.org/?module=pages&method=view&confpage=website_home

Items	Information
(4) Component and activity structure:	<p>counter the very real threats posed to national food security and food sovereignty by invasive plant pests and diseases. Legislative projects in Africa have a history of unnecessary delays. In South Sudan development partners have already drawn attention to a serious backlog of policies and legislation awaiting final approval by parliament. If this issue can be addressed by government, then there is no reason why a functioning national phytosanitary system should not be in place within the stated timeframe.</p> <p>The initial impact on the national budget is relatively small and consists largely in staffing and resourcing border posts and a small central office, mostly using staff who are already in post but are unallocated or underemployed. Phytosanitary services include some actions for which fees are payable (e.g. phytosanitary certificates, fumigation certificates, fumigators' licenses). This will provide a small but growing revenue stream to government⁹². As the national phytosanitary service assumes its full mandate, widening its operations beyond the southern boundaries of the nation, in-service training should be provided to new entrants by existing staff initially trained under this project. The incremental costs of the phytosanitary service therefore should easily be absorbed by a government budget benefiting from the peace dividend resulting from cessation of civil unrest. The proposed pest and disease diagnostic unit has a small staff and is deliberately envisaged as a single national facility. This could conveniently be based within a working government research centre (e.g. YARC⁹³) where its services would be of triple benefit: to extension, research and phytosanitary services.</p> <p>Spatial extent</p> <p>The ENPSP will be a national level project, because the activities envisaged are mainly within the domain of the national government as the primary law-maker and signatory of international conventions. The border control points for phytosanitary checks will be situated ultimately in all ten states but under this project, which is intended to create and fine-tune a working system, operations will be restricted to the southern borders and to Juba international airport. It is envisaged that the states may enact their own legislation based on the national legislation, to protect their population, agriculture and environment from movements of pests, diseases and illegal plant protection products. It will be desirable that the states (especially Central Equatoria) should then co-locate their own personnel alongside national phytosanitary staff at border posts. Early agreement to this arrangement will mean that training under this project can be extended to state plant protection personnel to facilitate their joint policing of border posts.</p> <p>The ENPSP is designed to create the phytosanitary system as a working model, based on prioritizing operations at the southern borders of the country through which the most serious phytosanitary threats are perceived to pass. It will be for the national government to extend this model to other borders as the improving security situation and the national budget allocation for agriculture may permit.</p>
	<p>Component 1 (Years 1-3): Develop a national phytosanitary service backed by legislation and compliant with international conventions (IPPC and WTO SPS).</p> <p>Component 2 (Years 2-4): Create a national plant pest and disease diagnostic capability.</p> <p>Component 3 (Years 2-4): Develop a national pesticide management system backed by legislation (compliant with the international pesticide conventions and the International Code of Conduct).</p> <p>Component 4 (Year 3-4): Enhance professionalism and safety standards of agro-input dealers and crop storage fumigation service providers in conformity with the International Code of Conduct on Pesticide Management.</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs	<p>Component 1: Develop a national phytosanitary service backed by legislation and compliant with international conventions (IPPC and WTO SPS).</p> <p>Activity 1.1: Recruitment of international phytosanitary consultant and national legal specialist (Year 1).</p> <p>Output 1.1: TOR and work plan.</p> <p>Activity 1.2: Phytosanitary stakeholder assessment, capacity evaluation and prioritization (Year 1).</p> <p>Outputs 1.2 Reports of phytosanitary stakeholder assessment, capacity evaluation and prioritization.</p> <p>Activity 1.3: Draft TOR and convene inter-ministerial phytosanitary task force (Year 1).</p> <p>Output 1.3: Detailed arrangements and TOR for inter-ministerial phytosanitary taskforce; minutes and participants lists for taskforce meetings (Year 1).</p> <p>Activity 1.4: Conduct awareness raising activities (at all stages. Years 1-4)</p> <p>Output 1.4: Reports of awareness raising activities addressing major stakeholders (Years 1-4).</p>
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⁹² Ideally such revenue should be utilized to cover consumable costs of the service provided.

⁹³ Yei has a stable electricity supply and is situated close to the Ugandan border, conveniently placed for servicing quarantine-related diagnostic needs.

Items	Information
	<p>Activity 1.5: Develop Draft Plant Protection Law for parliamentary approval (Year 2). Output 1.5: Final draft of Plant Protection Law (Year 2).</p> <p>Activity 1.6: Develop Draft Phytosanitary Regulation under Plant Protection Law (Year 2) Output 1.6: Final draft of Phytosanitary Regulation (Year 2).</p> <p>Activity 1.7: International TA specialist and MAFCRD PPD identify phytosanitary inspection service staff⁹⁴; perform training needs assessment and visit Kenya⁹⁵ to discuss and agree required training curriculum with training provider (COPE / KEPHIS)⁹⁶ (see Annex 2: Training Content for COPE Phytosanitary Systems Short Courses). Training courses will be up to 8 weeks formal instruction (maximum) and up to two weeks attachment to phytosanitary service provider per trainee (Year 1). Output 1.7: Training needs and specific courses identified and attachments proposed (including for conducting PRAs) (Year 1).</p> <p>Activity 1.8: Train staff for central office and border posts (Year 2); Output 1.8: Trained staff ready for deployment (Year 2).</p> <p>Activity 1.9: Carry out PRAs for at least two priority pests and diseases (as part of training attachments in Activity 1.8) including listing of all priority quarantine pests (Year 2) Output 1.9: Completed PRA reports for at least two priority pests and diseases completed, and initial agreed list of priority quarantine pests (Year 2)</p> <p>Activity 1.10: List and create necessary documentation and standard operating procedures for phytosanitary service (Year 3); Output 1.10: List of Documentation and SOPs; individual SOPs, forms (Year 3);</p> <p>Activity 1.11: Set up web page with details of law and SOPs for public access and transparency. (Train one person to update webpage) (Year 3). Output 1.11: Webpage with clear description of law, regulation, SOPs and any downloadable forms needed for import/export etc. (Year 3).</p> <p>Activity 1.12: Implement Phytosanitary Inspection Service, with deployment of staff at three border posts and Juba international airport (Year 3). Output 1.12: Quarterly and annual reports of inspections carried out and related diagnoses, follow-up etc. (Year 3).</p> <p>Component 2: Create a national plant pest and disease diagnostic capability.</p> <p>Activity 2.1: International TA Phytosanitary specialist and MAFCRD PPD conduct needs-assessment and consultation for plant pest and disease diagnostic laboratory services in support of phytosanitary regulatory actions, farmer extension and crops research. Assess current and anticipated provision of diagnostic services (including facilities, staffing, equipment and consumable supplies) from other sources within or outside of CAMP, including the appropriateness of the actual or projected institutional assignment and location of such diagnostic capacity (Year 2). Output 2.1: Needs assessment report documenting any current or anticipated provision of diagnostic services (including facilities, staffing, equipment and consumable supplies) and any additional unmet needs (Year 2).</p> <p>Activity 2.2: If no adequate provision for diagnostic services exists, identify suitably qualified (in crop production, plant pathology or related disciplines) scientific and technical staff within MAFCRD who are available for training and assignment to diagnostic laboratory⁹⁷ (Year 2). Output 2.2: List of suitable scientific and technical staff within MAFCRD (up to 3 junior professional staff and 3 technical staff) identified for diagnostic training (Year 2);</p> <p>Activity 2.3: Undertake tendering to obtain regional or international diagnostic training for insect pests and natural enemies, plant pathology (including nematodes) and virology (plant viruses) to service the additional needs identified by activity 2.1 (Year 2); Output 2.3: (i) List of identified BSc-qualified young professional trainees and three certificate- or diploma-qualified technical trainees and description of proposed courses; (ii) reports showing up to three scientific and three technical staff trained to post-graduate diploma (1 year) or professional certificate (6 month) level respectively to undertake specific diagnostic activities related to relevant groups of pests and/or plant diseases (Years 3-4).</p> <p>Component 3: Develop a national pesticide management system backed by legislation</p>

⁹⁴ Staff to be trained could include state as well as national staff, provided there is some agreement between MAFCRD and individual states to co-locate staff at border posts.

⁹⁵ Visit should require no more than 4-5 days including travel.

⁹⁶ Short-term training courses have been developed (with assistance from USAID-COMPETE) at the Centre of Phytosanitary Excellence (COPE) in Kenya. COPE is a virtual centre created as a joint venture of KEPHIS and the University of Nairobi. COPE has been endorsed as the sub-regional centre for phytosanitary training by the AU-IAPSC and COMESA.

⁹⁷ It is assumed that MAFCRD will not be able to increase its staff budget within the lifetime of this project. There is therefore a need either to retrain or upgrade capacity of existing MAFCRD staff or, as an alternative strategy, to develop the diagnostic facility and its trained staff within an Institute of Higher Education such as the University of Juba.

Items	Information
	<p>(compliant with the international pesticide conventions and the International Code of Conduct on Pesticide Management).</p> <p>Activity 3.1: Recruitment of international pesticide management consultant and national legal specialist (Year 2). Output 3.1: TOR and Workplan (Year 2).</p> <p>Activity 3.2: Pesticide management stakeholder assessment (including listing of pesticide importers/dealers) and capacity evaluation (Year 2). Outputs 3.2 Report of pesticide management stakeholder assessment and capacity evaluation (Year 2).</p> <p>Activity 3.3: Draft TOR and convene pesticide registration advisory committee (Year 2). Output 3.3: Detailed arrangements and TOR for pesticide registration advisory committee; minutes and participants lists for committee meetings (Year 2).</p> <p>Activity 3.4: Conduct awareness raising activities (at all stages) (Years 2-3). Output 3.4: Quarterly and annual reports of awareness raising activities addressing major stakeholders (Year 2-3).</p> <p>Activity 3.5: Draft, review and promulgate provisional list of permitted pesticides (Year 3); Output 3.5: Provisional list of permitted pesticides (Year 2).</p> <p>Activity 3.6: Develop Draft Pesticide Management Regulation under Plant Protection Law (covering registration of pesticides, licensing of pesticide importers and licensing of fumigation service providers (Year 3). Output 3.6: Draft of Pesticide Management Regulation (Year 3)</p> <p>Activity 3.7: TA Specialist to prepare proposal for accession to the International Pesticides Conventions for Minister of Agriculture (Year 3). Output 3.7: Draft proposal for accession (Year 3).</p> <p>Activity 3.8: Identify staff for Pesticide Registrar's office; perform training needs assessment and agree required training curriculum with training provider(s) (Year 3). Output 3.8: Report documenting training needs and specific courses and attachments proposed (Year 3).</p> <p>Activity 3.9: Train staff for Pesticide Registrar's office (Year 4). Output 3.9: Reports of training received. Trained staff ready to deploy (Year 4).</p> <p>Activity 3.10: List and create necessary documentation and standard operating procedures for Pesticide Registrar's office (Years 3-4). Output 3.10: List of Documentation and SOPs; individual SOPs, forms (Years 3-4).</p> <p>Activity 3.11: Set up web page with details of law and SOPs for public access and transparency and train MAFCRD website manager to update page (Year 4). Output 3.11: Webpage with clear description of law, regulation, SOPs and any downloadable forms needed for registration etc. (Year 4)</p> <p>Activity 3.12: Operationalise Pesticide Registrar's office (Year 4). Output 3.12: Reports of registrations carried out and related inspections, follow-up etc. (Year 4).</p> <p>Component 4: Enhance professionalism and safety standards of agro-input dealers and crop storage fumigation service providers in conformity with the International Code of Conduct on Pesticide Management.</p> <p>Activity 4.1: Recruitment of regional agrochemical industry consultant (e.g. CropLife representative) (Year 3) Output 4.1: TOR and work plan for consultant (Year 3)</p> <p>Activity 4.1: Using list of pesticide dealers developed under Component 3, Activity 3.2, design short training course (1 week) curriculum covering (i) provisions and requirements of Draft South Sudan Pesticide Regulation and International Code of Conduct for pesticide management and (ii) steps required to set up a national association of agro-input importers / wholesalers / retailers and model content for an association code of practice (CoP) (Year 4). Output 4.1: training course curriculum and draft CoP for national association (Year 4).</p> <p>Activity 4.2: Conduct training workshop for agro-input importers /wholesalers facilitated by regional consultant (e.g. CropLife representative), including session to discuss formation of an agro-input suppliers association for South Sudan and formulation of an appropriate code of good practice for the industry, based on CropLife International's code of practice and the International Code of Conduct (Year 4). Output 4.2: Report of workshop, including participants' final statement on formation of an association and adoption of a draft code of conduct (Year 4).</p> <p>Activity 4.3: Regional (or international) TA fumigation and ToT consultant to design and implement short ToT refresher training course (1 week) for national PPD staff and selected non-governmental trainees, to equip them to provide training to public (i.e. national and state government) and commercial fumigation service providers as a</p>

Items	Information
	<p>preparation for the latter to be licensed to utilize restricted-use fumigant pesticides safely to treat stored grain in warehouses (Year 3)⁹⁸.</p> <p>Output 4.3: Course training manual (for subsequent use by MAFCRD); list of government and non-government fumigation training providers trained.</p> <p>Activity 4.4: MAFCRD PPD staff, with supervision by TA consultant, undertake first certificated training course (5 days) for public (i.e. national and state government) and commercial fumigation service providers as a preparation for the latter to be licensed to utilize restricted-use fumigant pesticides safely to treat stored grain in warehouses (Year 4).</p> <p>Output 4.4: Report of training carried out and list of government and non-government fumigation service providers trained; annual list of licensed and certified service providers.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	Service providers to the project will include international and regional TA providers, locally recruited project staff, some subject matter specialists and managers of MAFCRD, especially the PPD and possibly some university staff. Junior staff will become service providers in the Phytosanitary Service and the Office of the Registrar of Pesticides, once trained. Training visits for MAFCRD staff to a regional centre of excellence are envisaged to build staff capacity to carry out the duties of the institutions to be created under this project.
(2) Description of beneficiaries within the framework of the project:	Initial beneficiaries will be: (i) staff of the MAFCRD receiving training in phytosanitary service provision and pest and disease diagnosis; (ii) importers and exporters provided with clear and transparent instructions on phytosanitary requirements; (iii) importers and wholesalers of pesticides receiving professional training. The ultimate beneficiaries will be the nation and people of South Sudan whose food sovereignty and food security will be enhanced by reduction of phytosanitary threats to production as a result of phytosanitary regulation, and whose health and safety will be enhanced by restriction of availability of unsafe pesticides and regulation and professionalization of agricultural pesticide suppliers.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<p>The main outcomes of the project will be:</p> <ul style="list-style-type: none"> • Legitimate trade in agricultural produce between South Sudan and its southern neighbours will be regulated and facilitated by a legally constituted national phytosanitary inspection service operating at the southern borders and the main international airport; • Crop pests and diseases intercepted at border checkpoints or reported by farmers or researchers will be reliably identified and the associated risks they pose for national food security will be analysed and managed. • Potential hazards to human health and the environment in South Sudan posed by pesticide importation and use will be substantially reduced by legally constituted government regulatory action and increased professionalization of private sector suppliers. <p>The impact will be that South Sudan's food sovereignty and food security will be enhanced by reduction of phytosanitary threats to production, while the health and safety of its citizens will be enhanced by reduction in risks from use of unregistered pesticides.</p>
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: a Positive: c</td> <td> <p>Project:</p> <p>a: is likely to have minimal or little impact on the environment and/or society</p> <p>b: may have an impact on the environment and/or society</p> <p>c: is likely to have a significant impact on the environment and/or society</p> <p>d: will have a significant impact on the environment and/or society</p> </td> </tr> </table>	Negative: a Positive: c	<p>Project:</p> <p>a: is likely to have minimal or little impact on the environment and/or society</p> <p>b: may have an impact on the environment and/or society</p> <p>c: is likely to have a significant impact on the environment and/or society</p> <p>d: will have a significant impact on the environment and/or society</p>
Negative: a Positive: c	<p>Project:</p> <p>a: is likely to have minimal or little impact on the environment and/or society</p> <p>b: may have an impact on the environment and/or society</p> <p>c: is likely to have a significant impact on the environment and/or society</p> <p>d: will have a significant impact on the environment and/or society</p>		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • The promulgation of a register of permitted pesticides backed by the force of law may cause a slight increase in the use of pesticides from current low levels. However the pesticide registration process will screen out more environmentally harmful pesticides in favour of safer alternative products. Registering pesticide importers/wholesalers and enhancing their professionalism and safety training may further reduce negative environmental and social impacts of pesticide use while increased income and food security resulting from better protection of crops and stored produce will have a positive social impact. <p>(Positive)</p>		

⁹⁸ This course should include examination of participants and certificates of competence (not attendance) should only be awarded to those who (i) are present for all sessions and (ii) pass the examination.

Items	Information
	<ul style="list-style-type: none"> The creation of a phytosanitary regulatory system supported by law is likely to have a positive social impact because imported plant materials will be screened and therefore in the medium term will be less likely to cause pest and disease problems.
2.6 Monitoring and evaluation for impact measurement	
(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> Number and size (and %) of consignments of imported plant materials subjected to phytosanitary screening (and sampling) in previous year. Number and size (and %) of consignments of imported plant materials found to contravene phytosanitary regulations in previous year. Number of consignments of export produce receiving certification in previous year. Number of plant pests and disease samples submitted for formal identification by specialists in-country in previous year. Number of plant pests and disease samples submitted for formal identification by specialists outside South Sudan in previous year. Number of virus diseases for which diagnosis can be undertaken in South Sudan. Number of unregistered pesticides offered for sale by agro-dealers. Number of unlicensed importers of pesticides.
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> Number and size (and %) of consignments of imported plant materials subjected to phytosanitary screening (and sampling) in previous year. Number and size (and %) of consignments of imported plant materials found to contravene phytosanitary regulations in previous year. Number of plant pests and disease samples submitted for formal identification by specialists in-country in previous year. Number of plant pests and disease samples submitted for formal identification by specialists outside South Sudan in previous year. Number of virus diseases for which laboratory diagnosis can be undertaken in South Sudan. Number of samples submitted for pest and disease laboratory diagnosis in previous year Number of unregistered pesticides offered for sale by agro-dealers. Number of registered pesticides. Number of unlicensed importers of pesticides. Number of licensed pesticide importers.
(3) Methods of measurement and sources of information:	<p>Statistical summaries from official records and reports of phytosanitary inspection service. Statistical summaries from official records and reports of the Office of the Pesticide Registrar.</p>
(4) Responsible parties for the monitoring and evaluation:	<p>MAFCRD PPD; external evaluators appointed by development partners.</p>
2.7 Required human resources	
(1) Principle of human resources management:	<p>Short-term technical assistance will be provided to develop the necessary legislation and systems for phytosanitary and pesticide management regulation. Regional short-term training courses and attachments will be utilized to build the capacity of national staff to carry out their regulatory duties.</p>
(2) Required human resources in the public sector (Positions, grades and numbers):	<p>The project expects to deploy existing staff of the PPD and other directorates within the MAFCRD. The minimal requirement is for:</p> <ul style="list-style-type: none"> Executive Director of MAFCRD PPD, as the National Plant Protection Organization (NPPO) head having overall legal responsibility for the work of the new institutions (Pesticide Registrar's office and Phytosanitary Service) to be created under this project, in addition to other duties. Senior Inspector in charge of Phytosanitary Services (one person, to be designated and assigned from existing MAFCRD staff) Registrar of Pesticides and Deputy Registrar (two persons, to be designated and assigned from existing MAFCRD staff). Administrative/accounting/financial officer and assistant for Registrar's Office (two persons, to be designated and assigned from existing MAFCRD staff); Secretary to Registrar of Pesticides (one person, to be designated and assigned from existing MAFCRD staff) Phytosanitary inspectors (x 4), assistant inspectors (x 4) (8 persons, to be designated and assigned from existing MAFCRD staff) Diagnostic laboratory staff (to be assigned from Research Directorate and/or the PPD⁹⁹. <ul style="list-style-type: none"> a) 3 professional staff (MSc or BSc plus five years experience) to be designated and assigned from existing MAFCRD staff) including Head of Laboratory who will be a professional specialist in addition to managing the two other specialists and three technical and three support staff. b) 3 technical staff (school certificate or training college certificate, or preferably

⁹⁹ As a support facility serving research, extension and phytosanitary services, the Pest and Disease Diagnostic Laboratory could be with the Research Directorate, as a unit within the Research Centre system.

Items	Information
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>diploma) to be designated and assigned from existing MAFCRD staff.</p> <p>c) 3 ancillary staff (one office assistant, one cleaner, one security guard).</p> <ul style="list-style-type: none"> • MAFCRD Website Manager (one suitably qualified and experienced specialist, part-time) This position should already exist within the MAFCRD system, but if not should be designated and assigned. This officer would maintain webpages initially created by the project to display information relating to the newly created institutions (Office of the Pesticides Registrar and the Phytosanitary Service). • International TA phytosanitary law senior specialist (advanced degree, 15 years phytosanitary / legal drafting experience, preferably partly in Africa) one • International TA pesticide regulation senior specialist (advanced degree, 15 years experience) one • Regional agrochemical association specialist (e.g. CropLife representative) (BSc degree, 10 years experience) one • Regional or international ToT provider for warehouse fumigation and licensing of fumigation service providers (BSc, certified trainer, 10 years experience) one in years 3 – 4, as necessary. • National TA junior legal specialists (law degree, 5 years experience) two, South Sudanese nationals with experience of legislation projects. • Web-design company commissioned to develop web pages for Phytosanitary Service and Office of Registrar of Pesticides and provide training for one MAFCRD staff member on website maintenance

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	<table border="1" style="width: 100%;"> <tr> <td style="width: 25%; text-align: center;">M</td> <td style="width: 25%; text-align: center;">L: Low</td> <td style="width: 25%; text-align: center;">M: Medium</td> <td style="width: 25%; text-align: center;">H: High</td> <td style="text-align: right;">(select an indicator from the list)</td> </tr> </table>	M	L: Low	M: Medium	H: High	(select an indicator from the list)
M	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	<p>The main risk in relation to creation of phytosanitary or pesticide-related legislation will be from delays in handling of draft legislation by ministerial committees and parliament which may prevent the attainment of the major legislative outcomes (Acts and Regulations) within the lifetime of the project. Development partners should seek assurances from the national government at the highest level before embarking on legislative projects.</p> <p>Development partners should also ensure careful consultation and sequencing of activities between ENPSP and its sister CAMP project, the "<u>National phytosanitary infrastructure project</u>", to avoid expenditure on building and equipping infrastructure that may never be used for its intended purpose¹⁰⁰. Infrastructure should only be commissioned once the development partner has received a written statement of intent by MAFCRD that staff and budgetary resources are available and that staff will be stationed in the proposed facilities.</p> <p>Any programme involving placing staff and facilities at border posts carries the risk of loss or damage due to civil unrest. In particular for the time being it is not practicable to place staff at or near the northern border with Sudan.</p> <p>There is also a significant risk that staff will be unwilling to be posted to small communities situated at or near borders. Provision of transport (motorbike with fuel allowance) would enable staff to commute to their place of work from the nearest suitable town¹⁰¹.</p> <p>In relation to functional training proposed under this project, there is a risk that training opportunities will be squandered by sending senior personnel who will not subsequently be involved in applying the learning gained through the training in their daily work¹⁰². It is absolutely essential that the proposed phytosanitary and diagnostic training is provided to early career professionals and technicians who will subsequently be expected to utilize what they have learnt in service delivery.</p> <p>There is also a danger that the course units advertised by COPE in their training manual may have ceased to be available due to staff turnover or failure of institutional support. The international consultant should visit KEPHIS to ascertain that the teaching staff, facilities, transport, field sites and training resources needed for the course, can in reality be made available, before committing project funding. Short courses offered by COPE should be tailored to South Sudan needs so that, for example, substantive pest risk analyses for maize and/or cassava are actually performed during the training, using the resources available at KEPHIS and other Kenyan centres. Course alumni should be expected to continue to perform similar tasks on return to South Sudan.</p>					

2.9 Other special considerations and/or notes

¹⁰⁰ This has already occurred with MAFCRD under the SAFDP with the construction of three border posts, ostensibly for seed inspection, which are still lying empty and unused.

¹⁰¹ Note that two vehicles, originally provided to MAFCRD for seed inspection under the Support to Agriculture and Forestry Development Project (SAFDP) are said to be available for phytosanitary activities. See footnote 16.

¹⁰² This has repeatedly occurred in the recent past, without delivering visible improvement in performance of the Plant Protection Unit, absorbing management time better spent in managing staff to achieve priority tasks.

Items	Information
(1) Other special considerations and/or notes:	
2.10 Routine operation and required resources after the completion of the project	
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>At least two trained senior level scientists and three trained laboratory assistants/technicians will be needed to staff the diagnostic laboratory, with at least 3 ancillary staff (one office assistant, one cleaner, one security guard).</p> <p>The pesticide registration system created under ENPSP will require a small permanent secretariat (Registrar of Pesticides, Deputy Registrar, accounting assistant, administrative assistant) which can be situated within the MAFCRD or in an independent unit, depending on decisions made in creating the legislative basis for the Registrar's Office. New pesticides for registration are normally proposed by companies which wish to register their products. There should be a fee for this process so the Office of the Pesticide Registrar is a source of limited revenue.</p>

Annex 1: Normative content for pesticide legislation¹⁰³

- Primary legal instrument governing pesticide or agrochemical control (Act of parliament/law, etc.)
 - Organisation responsible for pesticide registration and control
 - Governing body or board making decisions
 - Mandate to form specialist committee to register pesticides; to recommend registration (or refusal) to the governing body
 - Mandate to co-opt experts to advise on registration and evaluate
 - Basic definitions
 - Pesticide/pest control product/agricultural remedy
 - Classification of pesticides according to use and hazard (see below)
 - Key definitions for registration system (see below)
 - Power to make regulations or other secondary legislation
 - Registration system
 - Registrar or equivalent
 - Register of pesticides and certificate of registration
 - Registration 'committee' – see above
 - Defined categories of registration (or power to create these categories); mandate to revoke or modify registration status; data and documentary requirements:
 - Full
 - Provisional (pending supply of further data)
 - Experimental use
 - Provisions governing labelling, packaging, advertising
 - Due process in registration (transparency, timelines, etc.)
 - Pesticide use categories based on risk of adverse effects, e.g.:
 - General use
 - Restricted use
 - Severely restricted use
 - Prohibited
 - Inspection and monitoring
 - Appointment of inspectors
 - Duties of inspectors
 - Powers of inspectors to enter premises, take samples, etc.
 - Provision for monitoring post-registration use

N.B. Pesticide legislation should recognise and make provision for regulation of microbial biopesticides. Importation of other living biological control agents which are not necessarily applied in the same way as pesticides may also be covered and should be provided for and controlled by phytosanitary legislation.

¹⁰³ AATF [African Agricultural Technology Foundation]. 2013. *A Guide to the Development of Regulatory Frameworks for Microbial Biopesticides in Sub-Saharan Africa*. Nairobi: African Agricultural Technology Foundation.

Annex 2: Training Content for COPE Phytosanitary Training Courses. Source COPE, undated [2012]¹⁰⁴.

Course Unit		Duration	Mode of delivery	Assessment
Core units				
1	Introduction to International Treaties and Standards in phytosanitary systems	32 hrs	Lectures, exercises, group discussions and presentations, role plays case studies	CATs, quizzes, reports
2	Pest Risk Analysis (PRA)	40 hrs	Lectures, exercises on use of data bases, group discussions and presentations, practicals, case studies	CATs, quizzes, group reports
3	Phytosanitary import regulations and export certification systems	32 hrs	Lectures, field practicals, exercises, group discussions, role plays and presentations, case studies	CATs, quizzes, reports
4	Pest surveillance in phytosanitary system	32 hrs	Lectures, exercises, group discussions and presentations, field practicals, case studies, field visits	CATs, quizzes, group reports, examination
5	Pest Diagnostics in phytosanitary systems	40 hrs	Lectures, laboratory exercises, field visits	CATs, quizzes, reports
10	Pre and post-harvest phytosanitary management	16 hrs	Lectures, field visit, practical exercises, case studies and presentations	CATs, quizzes, practical and group reports
6	Practical Field Visits	32 hrs	Guided field visits	Field reports
Total Core Units Contact Time		224 hrs	28 days (or 6 weeks) equivalent	

¹⁰⁴ From: *Training Contents for Phytosanitary Systems Short Courses*. COPE, Nairobi, undated [2012]. xii+ 498 pp.

Annex 2 (continued): COPE Phytosanitary Training Courses. Source COPE, undated [2012]

Support units				
7	Emerging issues in phytosanitary systems	16 hrs	Lecture, exercises, group discussions and presentations, practicals	CATs, quizzes, group reports
8	Phytosanitary capacity evaluation (PCE) tool	6 hrs	Lectures, exercises using PCE software, group discussions and presentations	Group reports
9	Management and Ethics in phytosanitary systems	4 hrs	Lectures, exercises, group discussions and presentations	CATs, group reports
11	Standard Operating Procedures (SOPs) in phytosanitary systems	6 hrs	Lectures, exercises	CATs, quizzes, term papers
12	Introduction to basic communication skills	8 hrs	Lectures, exercises, group discussions and presentations	CATs, group reports
13	Development and certification of planting materials in phytosanitary systems	16 hrs	Lectures, field visit, exercises and presentations	CATs, quizzes, practical and reports
Total Support Units Contact Time		56 hrs	7 days (or 2 week) equivalent	

01.31 Establishment of a national phytosanitary system project (cont.)

SSP/USD = 4

Project duration	SSP/USD = 4												Total SSP '000 USD '000	% to total														
	Phase 1			Phase 2			Phase 3			Phase 4					% to													
Cost group	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	Total	% to	
5 Social assistance/donation (Emergency)	861	3,921	768	245																								
Total (SSP '000)	215	980	197	61																						5,815	100%	
% to total	15%	67%	14%	4%																						1,454	100%	

Public sector project
Routine work by government
Private sector project
Routine work by private sector

2.4.32 Quality standards and quality control for agricultural products project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Crop		
(2) Project name:	Quality standards and quality control for agricultural products project		
(3) Project ID:	0 1 3 2 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2023/24	Ending FY: 2029/30	Duration (years): 7
(5) Total investment:	SSP 20,851,000	USD 5,213,000	Note: Not including recurrent cost
(6) Name of this file (automatic):	CAMP Project profile format v9.1.docx		

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		CR.SA9	Production, research and management	Table 2-3
(2) Government organisation:	12	MAF-PE	Directorate of Agriculture Production and Extension Services	Table 2-6
(3) Activity types:	210	SP-SI	Service delivery and infrastructure development – Social infrastructure development	Table 2-12

1.3 Project characteristics:

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	X
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	X
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

Currently, there are no clear national standards for crop products in South Sudan. Thus, size and quality of crop products vary by producer and market. Consumers do not always have access to safe products (pesticide residues) of uniform quality. To remedy this, both in South Sudan and for export, it is necessary to develop a regulatory framework for quality standards for crop products and implement quality control of these standards.

Quality standards, including criteria for grading, sizing, marking (labelling for quality, origin etc.), and packing, need to be established. It is the responsibility of the National Bureau of Standards (NBS) to determine and promote standards specifications, including for agricultural products. However, the NBS has not established standards or controlled the quality at markets. Since MAFCRD has a mandate to control and regulate both quality and standards of quality for crop products, it should take the initiative and collaborate with NBS to develop standards for crop products and strengthen systems for enforcement.

In Africa, there are several organisations that develop and promote standards for the quality and safety of crop products. These include the Common Market for Eastern and Southern Africa (COMESA), East African Community (EAC), Southern African Development Community (SADC), Africa Cooperation in Accreditation (AFRAC), and African Regional Standardisation Organisation (ARSO). They also try to harmonise their standards. For example, COMESA, EAC, and SADC have jointly developed and adopted principles and procedures for tripartite standards since 2008. These three organisations have also tried to collaborate with ARSO.

Considering the future possibility of exporting crop products from South Sudan to other African countries, South Sudan needs to conform to the harmonised and/or adopted standards by these organisations and other countries. Existing guidelines related to harmonised standards should be used to develop a South Sudanese regulatory framework. Standards developed by FAO and WHO (CODEX Alimentarius) and the International Organisation for Standardisation (ISO) should also be integrated since these are accepted internationally.

A new enforcement system needs to be established based on the new regulatory framework and quality standards. The knowledge and skill levels of government officers, whose work includes quality control and standards, need to be improved. The role of inspectors of food quality needs to be clarified under the new framework. Those who implement quality control need to be equipped with appropriate tools and instruments.

(2) Objectives:

Ensure that crop products produced in South Sudan are of a high quality through the development of quality standards, procedures for quality control and capacity building of concerned staff about food quality and standards.

(3) Overall description including temporal and spatial extent of project:

A survey needs to be conducted to identify the general quality of crop products in markets and to assess the knowledge of quality and safety regarding the major crop products by farmers, retailers, wholesalers, and traders in all the 10 states. The necessary information to establish quality standards and grading will be gathered through this activity. It will take 3 months including survey design and report writing. A similar end of project survey will be conducted.

The roles of the NBS and MAFCRD need to be clarified for standards and enforcement of quality control; both NBS and MAFCRD should jointly develop the regulatory framework, quality standards, and procedures necessary for quality control. The NBS would be in charge of enforcement of quality control and developing legislation for crop product standards. MAFCRD will be responsible for training and disseminating information about the new quality standards through the extension system.

During the first year of the project the regulatory framework will be established and quality standards, including pesticide residues, defined for the major crop products. Developing detailed criteria for grading, sizing, marking, and packing will also be important activities. Sampling procedures and inspection methods need to be established. Enforcement strategies, including penalties for noncompliance should be considered. An inspection and grading unit (section) would be established in NBS.

In the second year major crops will be targeted. A training curriculum will be developed and training conducted for all relevant government officers of MAFCRD and the state ministries, agricultural extension officers (AEOs), community development officers (CDOs), cooperative officers (COs), NBS staff, community based extension workers

Items	Information
(4) Component and activity structure:	<p>(CBEWs), NGO staff, and employees of private sector agricultural companies. Training includes information about quality standards and exercises for grading and marking of major crops, vegetables and fruit. The equipment required for inspection and grading will be provided to NBS staff. In the fourth year other crops will be targeted in the same way – development of standards, training etc.</p> <p>Although the quality standards established by the new legislation will be compatible with regional and international standards, it is envisaged that they will be implemented gradually. In the third year implementation of the quality standards for major crops will start plus monitoring them. Large scale and progressive farmers will be the first targets. Activities will include raising awareness of the advantages of quality standards, in particular with respect to the premium prices obtained for properly inspected and packaged products. This should encourage large producers to invest in proper packing facilities and later to allow exports. Smallholders will be the next priority, plus confirmation that large scale and progressive farmers are using the quality standards.</p>
	<p>Component 1: Assessment of regulatory framework regarding quality standards in neighbouring countries, and status of quality and safety of crop products at major markets in South Sudan</p> <p>Component 2: Establishment of regulatory framework and development of quality standards and procedures for control</p> <p>Component 3: Provision of training and equipment for grading and quality control</p> <p>Component 4: Implementation of quality control activities and dissemination of information about quality standards to farmers</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Assessment of regulatory framework regarding quality standards in neighbouring countries, and status of quality and safety of crop products at major markets in South Sudan</p> <p>Activity 1.1: Conduct research on regulatory framework regarding standards in neighbouring countries and South Sudan Outputs: Report on regulatory framework in neighbouring countries and South Sudan</p> <p>Activity 1.2: Conduct baseline survey on quality and safety conditions of crop products in 10 states Outputs: Status of quality and safety conditions of crop products known, as well as challenges</p> <p>Activity 1.3: Investigate possibilities for joining international and/or regional organisations responsible for quality standards and quality control of products Outputs: Report about possibilities of joining international and/or regional organisations; presentation to senior and/or top level government officers.</p> <p>Component 2: Establishment of regulatory framework and development of quality standards and procedures for quality control</p> <p>Activity 2.1: Hold a meeting to clarify roles of the NBS and MAFCRD and develop an implementation strategy for quality standards and enforcement of quality control Outputs: Document specifies roles of NBS and MAFCRD, a strategic plan for quality standards and enforcement of quality control</p> <p>Activity 2.2: Establish regulatory framework includes defining quality standards for all the major crop products including detailed criteria for grading and marking procedures Outputs: Established regulatory framework and quality standards for major crop products (quality standards including standards for grades/classes, sizes, colours, packing requirements, amount of pesticide residues for grading and marking). A manual describing criteria for grading and marking procedures for major crop products</p> <p>Activity 2.3: Establish sampling procedures and develop inspection methods Outputs: Manual for quality control which shows established sampling procedures and inspection methods</p> <p>Activity 2.4: Establish an inspection and grading unit in NBS, and develop an implementation mechanism with state government officers Outputs: Inspection and Grading unit with clear responsibilities and assigned staff, clear demarcation between inspection and grading unit of NBS and state government staff with implementation mechanism on quality control</p> <p>Activity 2.5: Define quality standards for the remaining crop products, including detailed criteria for grading and marking procedures Outputs: Established quality standards for the other crop products, including standards for classes, sizes, colours, packing requirements, amount of pesticide residues for grading and marking. A manual describing criteria for grading and marking procedures for other crop products</p> <p>Activity 2.6: Develop crop product standards legislation and submit to parliamentary process</p>
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Items	Information
	<p>Outputs: Passed and published regulations about crop product standards</p> <p>Component 3: Provision of training and equipment for grading and quality control</p> <p>Activity 3.1: Prepare training contents covering regulatory framework, implementation mechanism, quality standards including criteria for grading and marking as well as sampling procedures and inspection methods</p> <p>Outputs: Developed training contents and materials, training schedules and venues arranged</p> <p>Activity 3.2: Conduct training for staff of MAFCRD, NBS, state ministry of agriculture, AEOs, CDOs, and COs</p> <p>Outputs: Government staff who are knowledgeable about quality standards and quality control for the major crop products (Training covers the contents indicated in the activity 3.1, only major crop products are covered in this round of training.)</p> <p>Activity 3.3: Procure and provide necessary equipment for inspection, grading, and marking to NBS staff</p> <p>Outputs: NBS staff able to enforce quality control of crop products</p> <p>Activity 3.4: Conduct training for CBEWs, NGO staff, and employees of private companies</p> <p>Outputs: CBEWs NGOs and private sector knowledgeable about quality standards and quality control for crop products (Training covers the contents indicated in the activity 3.1, but only major crop products are covered in this round of training.)</p> <p>Activity 3.5: Conduct training for staff of MAFCRD, NBS, state ministry of agriculture, AEOs, CDOs, and COs on the remaining crop products</p> <p>Outputs: Trained government staff who are knowledgeable about quality standards and quality control of the remaining crop products</p> <p>Activity 3.6: Conduct training for CBEWs, NGO staff, and private seed companies on the remaining crop products</p> <p>Outputs: CBEWs, NGOs and private sector knowledgeable about quality standards and quality control for remaining crop products</p> <p>Component 4: Implementation of quality control activities and dissemination of information about quality standards to farmers</p> <p>Activity 4.1: Establish monitoring and evaluation system on enforcement of quality control</p> <p>Outputs: Functioning monitoring and evaluation system on quality control activities</p> <p>Activity 4.2: Implement and monitor the activities for quality control such as inspecting, grading, and marking, etc.</p> <p>Outputs: On-going and reviewed quality control activities</p> <p>Activity 4.3: Develop a flyer about the new quality standards and inspection methods; AEOs, CDOs, COs and CBEWs explain about them to farmers</p> <p>Outputs: Quality standards and inspection methods understood by farmers through regular extension activities</p> <p>Activity 4.4: Conduct end of project survey to identify quality and safety conditions of crops products in 10 states</p> <p>Outputs: Survey report</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	NBS, Directorate of Agriculture Production and Extension Services of MAFCRD, state ministries of agriculture, AEOs, CDOs, COs, CBEWs, NGOs, and private companies
(2) Description of beneficiaries within the framework of the project:	Farmers from large scale to small scale, South Sudanese consumers, possibly consumers in other countries, if export of crop products becomes possible.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	Quality and safety conditions of crop products are improved in general. For some crop products, quality and safety levels will meet the standards of other African countries and possibly other countries, allowing exports.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable) Not applicable

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: a Positive: d</td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: a Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: a Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation	<p>(Negative)</p> <ul style="list-style-type: none"> This project does not require construction of any facilities. Development and adaptation of new quality standards of crop products will not influence the environment negatively. <p>(Positive)</p>		

Items	Information
measures:	<ul style="list-style-type: none"> Newly developed quality standards will include criteria about the amount of pesticide residues. Pesticide residues need to be reduced to meet the standard. Thus, use of pesticides will be minimised once the inspection and enforcement activities are started. It would reduce negative impacts on soil condition as well as human bodies. If the new standards meet the standards of regional and/or international organisations, the value and reputation of South Sudanese crop products would be raised, and exports of some products may be possible. This would cause increases in prices and production volumes in South Sudan which impacts on South Sudanese farmers positively.

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> Existence of quality standards and an inspection procedure for crop products Existence of regulatory framework for quality control on crop products Number of inspectors who have appropriate knowledge and equipment about food inspection and inspected crop products
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> Operational quality standards and an inspection procedure for crop products Number of crop products which have quality standards Number of NBS inspectors, AEOs, CBEWs, and other government staff and employees in the private sector trained about the new quality standards on crop products Number of farmers which adopt and follow the quality standards Number of crop products which meet the quality standards
(3) Methods of measurement and sources of information:	Documents about quality standards, guideline and manual for the inspection procedure and sampling methods, project report, training records, monitoring reports
(4) Responsible parties for the monitoring and evaluation:	NBS, Directorate of Agriculture Production and Extension Services of MAFCRD, state ministries of agriculture

2.7 Required human resources

(1) Principle of human resources management:	Officers of NBS need to cooperate with the project implementation. NBS should assign suitable officers to work with the project team members from MAFCRD. Appropriate and sufficient numbers of officers need to be assigned to the inspection and grading unit at NBS to operate quality control activities across the country. Coordination with the relevant state officers needs to be carried out by NBS and MAFCRD. A baseline survey and an end of project survey will be subcontracted with local consultants and/or NGO.
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> Project manager from MAFCRD (one senior staff from the MAFCRD, Directorate of Agricultural Production and Extension Services, grade 3 or 4) Project staff from MAFCRD (two staff, one staff from the Directorate of Agricultural Production and Extension Services, one staff from Directorate of Plant Protection) and project staff from NBS (two staff with appropriate knowledge about food quality and safety) for project detailed design, conduct of needs assessment, project implementation and management, procurement, logistics, and monitoring, etc. Senior inspector in the state Ministry of Agriculture (one from each state) (These project staff from the state Ministry of Agriculture support the above project team to implement the project.)
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	Consultants in the field of: <ul style="list-style-type: none"> Project management (Master's degree, 15-years experience): One Expert for quality control about agricultural products (BA or BSc, 10-years experience or more): One Extension and training expert (BA or BSc, 5-years experience or more): One Project coordinator (BA in Agriculture desirable, 3-years experience or more): One Training will be provided by government training centres and Yei Agricultural Training Centre Baseline and end of project survey in 10 states will be outsourced to local NGOs and/or local consultants

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	M L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	It is expected to take time for the quality standards to be adopted by farmers and at markets since currently there are no quality standards for crop products. Large scale farmers have more capability to adopt and follow the quality standards, but small scale farmers may not have the financial capacity and human resources to adopt and follow them in the short term. Even if a penalty is set to follow the standards, some people may resist accepting the quality standards if there are no incentives. It would be better to propagate quality standards gradually starting with the large scale and progressive farmers and major crops. Other measures to promote and enforce quality standards need to be considered.

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	<ul style="list-style-type: none"> Working with NBS in a cooperative manner will be a key for the success of this project. However, the aim of this project is crucial for the future of the agricultural sector in the country. Failure of the project due to miscommunication and lack of collaboration between NBS and MAFCRD must be avoided. Thus, pre-discussions and development of consensus between these two governmental entities would be a prerequisite before
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Items	Information
	<p>seeking funds.</p> <ul style="list-style-type: none"> • Development of crop products standards legislation and submission to parliament to make it operational will be critical for enforcement of quality standards developed. This must be done swiftly after collecting all the necessary information and discussing with the stakeholders. • Joining a regional and/or international organisation such as COMESA, EAC, AFRAC and/or ARSO could make the export of crop products easier. However, this point needs to be considered carefully including economic and social impacts caused by free trade of non-agricultural products. Selecting the most beneficial options for South Sudan must be decided by top level government officers.

2.10 Routine operation and required resources after the completion of the project

<p>(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.</p>	<p>Routine inspection on different crop products according to the quality standards and inspection procedures, monitoring and evaluation on quality control activities, maintenance cost for equipment for inspection, grading and marking, budget for recurrent cost for quality control activities as well as maintain the inspection and the grading unit in NBS</p>
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01.32 Quality standards and quality control for agricultural products project (cont.)

SSP/USD = 4

Project duration	Phase 1		Phase 2		Phase 3		Phase 4		Total																				
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000	% to total		
5 Implementation of research, studies and surveys																													
6 Delivery of extension and training services to the private sector																													
7 Operation and maintenance																													
2 Construction of infrastructure and procurement of equipment																													
1 Construction of office buildings																													
2 Construction of research, training and other specialized buildings																													
3 Construction of feeder roads																													
4 Construction of production, market and transportation facilities																													
5 Acquisition of land																													
6 Procurement of vehicles																													
7 Procurement of equipment																													
1 Diagnostic test kits																													
2 Test kit to measure nutritional contents																													
3 portable measures and scales																													
3 Subsidies, equity and loans																													
1 Provision of cash and/or in-kind subsidies																													
2 Provision of training services to the private sector																													
3 Equity investments																													
4 Provision of loans																													
5 Social assistance/donation (Emergency)																													
Total (SSP '000)																													
Total (USD '000)																													
% to total																													

Public sector project
Private sector project
Routine work by government
Routine work by private sector

2.4.33 Tractor assembly plant establishment support project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Crop		
(2) Project name:	Tractor assembly plant establishment support project		
(3) Project ID:	0 1 3 3 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2015/16	Ending FY: 2017/18	Duration (years): 3
(5) Total investment:	SSP 5,758,000	USD 1,440,000	Note: Not including recurrent cost
(6) Name of this file (automatic):	CAMP Project profile format v9.1.docx		

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		CR.SA4	Private sector projects and businesses	Table 2-3
(2) Government organisation:	12	MAF-PE	Directorate of Agricultural Production and Extension Services	Table 2-6
(3) Activity types:	302	PS-MF	Private sector - Manufacturing	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	X
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	
	81	WA	Warrap State	
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	
	91	WE	Western Equatoria State	
	92	CE	Central Equatoria State	X
93	EE	Eastern Equatoria State	X	
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	X
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	X
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

In South Sudan, farming generally has been carried out by hand and/or primitive hand tools. Labour availability for farming is limited and costly across the country. Thus, the majority of farmers have to rely on family members to carry out farming, especially smallholders.

Very limited availability of farm tractors makes the cost of hiring farm tractor services high. The availability of tractors is limited because all tractors are imported and expensive. Spare parts for any type of tractors are difficult to procure. They are only available from Uganda and/or Kenya or other neighbouring countries. The limited number of competent tractor operators and maintenance technicians is another reason.

On the other hand, demand for tractor use is high across the country according to the CAMP situation analysis report (SAR). Not only large scale and progressive farmers want to use tractors, but also small scale farmers are seeking opportunities to use a tractor to improve the efficiency of their farming and/or expand their farm lands. Many farmers have to wait a long time to utilise tractor hire services.

In this current situation, farmers would not be able to improve either their yields or income levels. For farmers to earn a living from agriculture as an economic activity they cannot count on hand tools alone, they need to have access to relevant equipment to operate their farms. If more farm tractors were available domestically at lower prices with easily available spare parts, more farmers would be able to utilise farm tractors.

Additionally, there are many large scale farmers in Renk, Upper Nile State. This area has potential for large scale commercial farming; the soil condition is suitable for using farm tractors. Promoting large scale farming with farm tractors in suitable areas is one approach to transform agriculture in South Sudan.

There are two other possible CAMP projects which would contribute to improve mechanisation of agriculture. These are the "Enhancement of tractor hire service providers project" and the "Tractor operator training project." This project should promote the establishment of a farm tractor assembly plant to provide farm tractors at more reasonable prices, so that the availability of farm tractors is significantly improved.

(2) Objectives:

Establish an integrated facility for assembling and testing agricultural tractors up to 80 Horse Power (HP) for 4 wheel drive and 75 HP for 2 wheel drive, plus matching agricultural implements e.g. disc ploughs, harrows, tillers, agriculture trailers.

(3) Overall description including temporal and spatial extent of project:

The project will start with activities to prepare for the establishment of a tractor assembly plant. Registering a company and finding appropriate land may take time, but must be completed in the first year, prior to the construction of the assembly plant, with strong support by the project.

Availability of land will be critical to determine the location. The project must support the company to find the most appropriate place for their business. Considering accessibility and availability of government organisations and the other private companies, the location of the assembly plant should be in and/or around Juba area.

Once land has been identified, the rest of the activities for component 1 could be implemented concurrently with the activities of components 2 and 3. Construction of the plant should not take more than a year and a half, but this will be decided by the private company which will be the owner and operator of the assembly plant.

(4) Component and activity structure:

Component 1: Support for constructing and operating a tractor assembly plant and developing a conducive business environment
 Component 2: Construction of tractor assembly plant and agriculture implements assembly workshop
 Component 3: Establish a supply chain of genuine spare parts for the tractors manufactured by the assembly plant

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

Component 1: Support for constructing and operating a tractor assembly plant and developing a conducive business environment
 Activity 1.1: Conduct feasibility study on establishing a tractor assembly plant in South Sudan
 Outputs: Study report
 Activity 1.2: Develop standards and guidelines on the requirements for establishing a farm tractor assembly plant
 Outputs: Standards and guidelines made available to prospective investors

Items	Information
	<p>Activity 1.3: Identify a private company to establish a farm tractor assembly plant in South Sudan; establish project team of MAFCRD and the company Outputs: A company which understands the objective of the project is confirmed and a project team is developed.</p> <p>Activity 1.4: Facilitate development of detailed plans for construction of the assembly plant Outputs: Detailed plans including details about plant capacity, and cost analysis, as well as man power requirements and training plans in the context of South Sudan (developed by the company and facilitated as necessary by MAFCRD).</p> <p>Activity 1.5: Select land and obtain rights to use it for the establishment of an assembly plant (The project team provides technical and administrative support to the company to find land and obtain rights to it.) Outputs: Land with rights to be used for establishing an assembly plant</p> <p>Activity 1.6: Support the company to register their business with the government Outputs: Company officially registered to do business in South Sudan (The project team provides technical and administrative support to the company to register with the government.)</p> <p>Activity 1.7: Support developing and passing a bill to provide tax exemption to newly established private farm tractor assembly company for the first ten years (The project team support the MAFCRD to develop and submit a bill.) Outputs: Tax exemption for newly established private farm tractor assembly company for the first ten years</p> <p>Activity 1.8: Support developing and passing a bill to make loans available to private sector agro-input providers at lower interest rates from a government bank for the first ten years of business (The project team support the MAFCRD to develop and submit a bill.) Outputs: Lower interest rate loans available to private sector agro-input providers for the first ten years of business (these loans may be from the existing government bank – Agricultural Bank of South Sudan)</p> <p>Activity 1.9: Hold a business forum to support the tractor company and its potential customers as well as other private companies in agricultural sector Outputs: Strengthened linkages among the tractor company and other related stakeholders as well as large scale and progressive farmers</p> <p>Component 2: Construction of tractor assembly plant and agriculture implements assembly workshop</p> <p>Activity 2.1: Develop a plan for environmental impact assessment (EIA) and conduct it Outputs: EIA report</p> <p>Activity 2.2: Support and monitor process of constructing a tractor assembly plant and a workshop to assemble implements (The project team provides technical and administrative support to the company for better preparation.) Outputs: Assembly plant and workshops with required equipment and tools</p> <p>Activity 2.3: Assist with inauguration of the assembly plant Outputs: Inauguration ceremony</p> <p>Component 3: Establish a supply chain of genuine spare parts for the tractors manufactured by the assembly plant</p> <p>Activity 3.1: Hold periodic meetings with the project staff of the “<u>Enhancement of tractor hire service providers project</u>”. This project will establish spare part supply chains. These supply chains should include parts for tractors assembled by the new plant Outputs: Spare parts available for tractors assembled by the new plant through the established supply chain</p> <p>Activity 3.2: Conduct end of project survey to assess situation of the assembly plant and availability of farm tractors in different parts of the country Outputs: Survey report</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	A private company which will be the owner and operator of a tractor assembly plant, Department of Agricultural Mechanization: Directorate of Agricultural Production and Extension Services of MAFCRD
(2) Description of beneficiaries within the framework of the project:	Direct beneficiaries will be subsistence, medium and large scale farmers. Indirect beneficiaries will be farm machinery contractors and tractor hire service agencies.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<ul style="list-style-type: none"> • Introduction of modern equipment and technologies for farming practices • Stable supply of genuine tractor parts for tractors produced by the company establishing the assembly plant • Generation of employment opportunities at the assembly plant • Improve efficiency of farming by farm tractor users
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Items	Information		
(2) EIRR and/or FIRR, and/or other economic analysis	(if applicable) N/A		
2.5 Environmental and social impact, and mitigation measures			
(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: c Positive: d</td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: c Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: c Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> Considering the expected size and functions of the plant, significant environmental impacts are expected. Water residues and other chemical disposals need to be properly processed and handled to avoid creating contamination of the surrounding environment. Noise created by the plant also should be treated to make it as small as possible to avoid conflict with the neighbouring residents. EIA has to be conducted and sessions held for explaining to the neighbouring residents prior to the construction. The location of the plant should be in an industrial area to be identified by the government according to town plans to minimise social and environmental negative impacts. The government should support the process of finding an appropriate site. Another concern would be forest destruction. If a large number of farm tractors are sold and used by farmers in South Sudan, there is likely to be more cultivated farm lands. For that, more trees would be cut down. <p>(Positive)</p> <ul style="list-style-type: none"> The most positive impacts through this project will be improvement of efficiency of farming. If a reasonable farm tractor was available at more affordable prices to farmers, it would be purchased by many large scale and/or progressive farmers. More efficient farming would lead to increase of yields. Increase of total harvest volume would support farmers to improve profit levels and create business opportunities. Another positive impact would be the creation of employment opportunities. A large numbers of staff and technicians would be necessary to operate the assembly plant. This project could provide employment opportunities to many people. A successfully operating tractor assembly plant in South Sudan could show that the business environment for agri-business is becoming better for the private sector. It could lead to establishment of other tractor related businesses and/or bring other investments. All this would have a significant positive impact on the South Sudanese economy. 		
2.6 Monitoring and evaluation for impact measurement			
(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> Number and price of available farm tractors Number and price of available implements for farm tractors 		
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> Number and price of available farm tractors Number and price of available implements for farm tractors Number of trained engineers who have sufficient skills for assembling tractors and farm tractor implements 		
(3) Methods of measurement and sources of information:	Feasibility study and end project surveys, other project reports, information from the Department of Agricultural Mechanization: Directorate of Agricultural Production and Extension Services of MAFCRD		
(4) Responsible parties for the monitoring and evaluation:	MAFCRD (Department of Agricultural Mechanization: Directorate of Agricultural Production and Extension Services of MAFCRD) in collaboration with the Ministry of Industry and Mining, Ministry of Environment and any related line Ministries		
2.7 Required human resources			
(1) Principle of human resources management:	Both human and physical resources are required for the success of the project. The private sector/government need to put much emphasis on employing local staff, taking into consideration their technical know-how/area of specialization that is relevant to the required assignment/job. In case there is a position for which no national is qualified, a foreigner should be contracted to fill the position and to train a national for the position. However, at least 80% of the work force is expected to be South Sudanese.		
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> Project manager from MAFCRD (one senior staff from the MAFCRD, Directorate of Agricultural Production and Extension Services, grade 3) Project staff from MAFCRD (two inspectors of mechanical engineering, technicians for agricultural implements from the Directorate of Agricultural Production and Extension Services, Department of Agricultural Mechanization and Department Agricultural Extension Services) for project detailed design, conduct of needs assessment, project implementation and management, procurement, logistics, and monitoring, etc. 		
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	Consultants in the field of: <ul style="list-style-type: none"> Project manager (Master's degree or more, 15-year experience): One Farm machinery specialist (BSc. Mechanization, 10 years' experience or more): One Business development specialist (BSc. Or BA, 5 years' experience or more): One Project coordination (BA. or BSc, 3 years' experience or more): One 		

Items	Information					
2.8 Risk assessment with respect to project objectives and resources to be applied						
(1) Expected level of risk:	<table border="1"> <tr> <td>H</td> <td>L: Low</td> <td>M: Medium</td> <td>H: High</td> <td>(select an indicator from the list)</td> </tr> </table>	H	L: Low	M: Medium	H: High	(select an indicator from the list)
H	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	<p>The feasibility study includes examination of demand for farm tractors and should be conducted carefully to include financial capability of customers. Cost projections to operate the plant also need to be carefully made when the plant is designed. Since the assembly plant is owned and operated fully by a private company, the operational plan of the plant needs to be realistic and profit must be generated.</p>					
2.9 Other special considerations and/or notes						
(1) Other special considerations and/or notes:	<p>Selection of the project /plant area should not be close to residential areas due to both direct and indirect environmental impacts associated with the plant. The state government and the local communities of the selected area should be involved from the beginning to be a part of the explanation processes for the surrounding residents.</p> <p>Several large scale generators will be necessary to operate the assembly plant. Purchasing, operation and maintenance cost for these generators need to be counted in construction and recurrent costs which the company needs to be responsible for.</p> <p>This project is related to the "Enhancement of tractor hire service providers project" especially about establishment of a supply chain for genuine tractor spare parts.</p>					
2.10 Routine operation and required resources after the completion of the project						
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>Routine training and monitoring for improvement of staff's skills for efficient tractor assembly and implements assembly will be necessary. Periodic monitoring on the compliance of the factory to government regulations and standards will also be necessary.</p>					

Part 3: Project cost estimation

Project duration	SSPIUSD = 4												Total																
	Phase 1			Phase 2			Phase 3			Phase 4				% to															
Cost group	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000	total		
1 Management and operation of project	2,614	2,081	1,032																							5,727	1,432	99%	
1 Deployment of government staff																										54	14	1%	
1 Business forum at state (per diem)		29	25																							11	3	0%	
2 Business forum at state (transportation)		11																								18	5	0%	
3 Assessment survey (per diem)		18																								16	4	0%	
4 Assessment survey (transportation)																										9	2	0%	
2 Procurement of administrative services (contracted)																													
3 Procurement of professional services (contracted)	2,608	2,052	1,001																							5,660	1,415	98%	
1 International consultant (project manager)	756	756	504																							2,016	504	35%	
2 International consultant (farm machinery)	540	540	270																							1,350	338	23%	
3 International consultant (business development)	454	378	76																							907	227	16%	
4 International consultant (project coordination)	378	378	151																							907	227	16%	
5 Local consultant (feasibility study)	360																									360	90	6%	
6 Local consultant (EIA)	120																									120	30	2%	
4 Implementation of staff training																										6	2	0%	
1 Meeting for development of plan	6																									6	2	0%	
5 Implementation of research, studies and surveys																										1	0	0%	
6 Delivery of extension and training services to the private sector																										6	2	0%	
7 Operation and maintenance																										6	2	0%	
1 Fuels for site visit																													
2 Fuels for assessment survey																													
2 Construction of infrastructure and procurement of equipment																													
1 Construction of office buildings																													
2 Construction of research, training and other specialized buildings																													
3 Construction of feeder roads																													
4 Construction of production, market and transportation facilities																													
5 Acquisition of land																													
6 Procurement of vehicles																													
7 Procurement of equipment																													
3 Subsidies, equity and loans	14	18																								32	8	1%	
1 Provision of cash and/or in-kind subsidies																										18	5	0%	
1 Inauguration ceremony of the plant		18																								18	5	0%	
2 Provision of training services to the private sector	14																									14	3	0%	
1 Meeting for prospective investors	14																									14	3	0%	
3 Equity investments																													
4 Provision of loans																													
5 Social assistance/donation (Emergency)																													
Total (SSP '000)	2,627	2,099	1,032																							5,758	1,440	100%	
Total (USD '000)	657	525	258																							1,440	360	25%	
% to total	46%	36%	18%																							100%			
4 Private sector co-finance (land acquisition and plant construction)																													
Total (SSP '000)																											24,000	6,000	25%
Total (USD '000)																											6,000	1,500	25%
% to total																											100%		

Public sector project
Routine work by government
Private sector project
Routine work by private sector

2.4.34 Establishment of a firm legislative framework project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Crop		
(2) Project name:	Establishment of firm legislative framework project		
(3) Project ID:	0 1 3 4 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2015/16	Ending FY: 2017/18	Duration (years): 3
(5) Total investment:	SSP 8,844,000	USD 2,211,000	Note: Not including recurrent cost
(6) Name of this file (automatic):	CAMP Project profile format v9.1.docx		

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		CR.SA1	Policy and legal framework development	Table 2-3
(2) Government organisation:	13	MAF-AE	Directorate of Planning and Agriculture Economics	Table 2-6
(3) Activity types:	101	ID-LI	Institutional development – Legal and institutional development	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	X
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	X
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income		

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>A legislative framework would provide an enabling environment for the crop subsector. It would bring discipline, direction, opportunities and organised systems to the subsector.</p> <p>Legislation is lawmaking; the legislative process is a series of steps that a legislative body takes to evaluate, amend, and vote on proposed legislation. In South Sudan most legislation is enacted by the national and state assemblies. Implementation of legislation is left to other entities, such as law enforcement agencies, the courts, community leaders, and other government agencies. Typically the government 1) formulates a policy, 2) passes laws to implement the policy, 3) provides additional regulations, and 4) finally enforces it.</p> <p>This project will address the first 3 components of the legislative framework: 1) policy framework, 2) legal framework, 3) regulatory framework. The enforcement framework is addressed in <u>"Enhancement of laws and regulations enforcement project"</u>.</p> <p>In the agriculture sector, there is a policy entitled the "Agricultural Sector Policy Framework 2012-2017 (ASPF)." It was passed by the National Legislative Assembly (NLA) which is South Sudan's national parliament in December 2012. ASPF is the most current comprehensive policy document containing subsector policy guidelines. ASPF consists of vision, mission, goal, targets, key policy choices, guiding principles, subsector policy guidelines etc. It will be an important policy document to refer when establishing a legislative framework.</p> <p>MAFCRD also has formulated other subject specific policies. These are in the areas of plant protection, horticulture, agriculture mechanisation, soil health and conservation (use of fertilisers etc.), seed, agricultural research, training and capacity development, extension, rural development, rural finance, agricultural marketing, food security etc. The policy for extension was developed with the Ministry of Livestock and Fisheries Industry (MLFI) to make it more comprehensive by combining policies of the two ministries.</p> <p>There are other policies proposed bills and approved acts that impact the crop subsector such as the "Environmental Protection Bill", "South Sudan National Environmental Policy", "South Sudan Land Policy", "South Sudan Land Act", "South Sudan Water Policy", and "Wildlife Conservation and National Parks Act."</p> <p>Laws and regulations have not been formulated from all these policies. Some of the above policies, bills and acts may be contradictory; there may be duplication and policy gaps. For instances, laws and regulations regarding trade, labour, market, safety and quality standards, agro-inputs, and intellectual property rights may be weak or insufficient. Analysis is needed to identify these shortcomings. This analysis would help develop a legislative framework which is comprehensive. It needs to be developed within the context of the "Transitional Constitution of the Republic of South Sudan."</p> <p>To fill gaps in the legislative framework, new policies, acts and regulations may need to be developed so as to develop a comprehensive legislative framework. Approval of bills so they become law is also an important process. The established legislative framework would assist in establishing an enforcement framework as well as generally raising the credibility of South Sudan and its crop products.</p>
(2) Objectives:	<p>Major objective of this project is to establish a firm and comprehensive legislative framework for the crop subsector. Other objectives to achieve the major objective are listed below.</p> <ul style="list-style-type: none"> • Identify gaps in existing policies, laws, and regulations. • Harmonise policies, laws and regulations at national, state and local levels. • Support MAFCRD to develop necessary policies, laws and regulations.
(3) Overall description including temporal and spatial extent of project:	<p>In the beginning of the project, the existing national legislative framework (policies, laws, regulations and enforcement) of the crop subsector should be reviewed to find duplications and gaps. Since there is a large volume of policies and laws, this activity may require several months. Clarification of which Directorates and other government institutions are responsible will be part of the review process. This review is crucial to understand the actual situation regarding the legislative framework.</p> <p>Based on the review, a draft comprehensive legislative framework would be prepared with a comparison to the existing legislative framework. This would be completed by end of the 1st year.</p> <p>Based on the draft legislative framework, there will be consultations with key staff of state and local governments in all ten states. The purpose of this is to understand the legislative</p>

Items	Information
(4) Component and activity structure:	<p>framework existing at state and local levels with the aim of harmonising the different levels. A final draft of the legislative framework will incorporate feedback from state and local level governments and stakeholders. The final draft would be ready by the middle of the 2nd year.</p> <p>When the draft legislative framework is ready, training will be conducted on the legislative process (policy development, identifying policy gaps, formulating necessary policies, laws and regulations, enforcement etc.). Directorates responsible for creating/amending policies/laws etc. will be determined (based on the draft framework) and schedules set up. Policies/bills will be created/amended and submitted to parliament. The project team would support MAFCRD in these activities. The project also will provide technical support for MAFCRD to collaborate with other ministries whose policies/laws affect the crop subsector and may require revising; this will continue until the end of the project. The project team needs to interact with the "<u>Legal and regulatory framework enhancement project</u>".</p> <p>Component 1: Review existing national policies, laws and regulations related to crop subsector Component 2: Develop a comprehensive legislative framework for crop subsector Component 3: Harmonise national, state and local policies, laws and regulations Component 4: Develop capacity and provide support for developing and/or revising policies, laws and regulations</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1: Review existing national policies, laws and regulations related to crop subsector Activity 1.1: Review contents of the existing national policies, laws and regulations Outputs: Report on existing policies, laws and regulations Activity 1.2: Analyse report for policy/law gaps, duplications, contradictions etc. in existing policies, laws and regulations Outputs: Identification of shortcomings in the existing policies, laws and regulations; responsible Directorates for existing policies identified</p> <p>Component 2: Develop a comprehensive legislative framework for crop subsector Activity 2.1: Develop a legislative framework for crop subsector Outputs: A draft legislative framework developed; necessary additional policies and laws identified with a timeframe to develop them Activity 2.2: Clarify which Directorates and other related Ministries and/or institutions are responsible for implementing the new legislative framework (policy/laws/regulations/enforcement) Outputs: Directorates and other Ministries and/or institutions responsible for the new legislative framework identified Activity 2.3: Establish a periodic review system of policies and laws, and how well they function; and of the parliamentary process for approval Outputs: Laws and policies are reviewed periodically and a monitoring system developed that includes tracking the progress of legislation through the legislative process. Periodic meeting should be held by the members of the monitoring committee. Meetings will be held every other month.</p> <p>Component 3: Harmonise national, state and local policies, laws and regulations Activity 3.1: Collect and review information about state and local legislative frameworks; compare to draft national legislative framework Outputs: State and local legislative frameworks identified and compared to draft national legislative framework Activity 3.2: Discuss with state, county, payam and boma officers a plan for harmonisation of legislative frameworks Outputs: Relations among the various frameworks, opinions of state and local level officers for harmonisation obtained, necessary actions clarified and documented</p> <p>Component 4: Develop capacity and provide support for developing and/or revising policies, laws and regulations Activity 4.1: Identify team members and establish task teams for formulation of required policies and bills Outputs: Members for formulation of policies and laws determined, task teams formed if necessary Activity 4.2: Prepare and conduct training for related government officers and task teams on policy analysis, policy and laws development; how the legislative process works from policy to enforcement and how to monitor it Outputs: Training contents and materials, government officers and task teams trained Activity 4.3: Support development of required policies and bills Outputs: Developed and/or revised draft policies and bills submitted for parliamentary</p>
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Items	Information		
	approval		
2.3 Service providers and beneficiaries			
(1) Description of service providers within the framework of the project:	Directorate of Planning and Agriculture Economics, other concerned Directorates of MAFCRD, and other related Ministries and/or governmental institutions		
(2) Description of beneficiaries within the framework of the project:	Development of a comprehensive legislative framework will be beneficial for farmers and others working in the crop subsector. Officers of MAFCRD, state, county, payam, and boma as well as staff of government research and training centres would be beneficiaries of a better legislative framework.		
2.4 Outcomes, impact and contributions to value added (i.e. economic growth)			
(1) Outcomes and impact:	A legislative framework would create a better enabling environment for farmers and other stakeholders for crop products so as to enhance their businesses which would lead to agricultural development. The firm legislative framework would generally raise the credibility of South Sudan and its crop production and products. Capacity of national government officers will be strengthened.		
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable) N/A		
2.5 Environmental and social impact, and mitigation measures			
(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: a Positive: d</td> <td>Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society</td> </tr> </table>	Negative: a Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: a Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> No significant negative impacts are expected through this project. <p>(Positive)</p> <ul style="list-style-type: none"> Establishment of a legislative framework will show weaknesses and necessary work in legal areas clearer. Development of required policies and acts/bills would create a better enabling environment for government officers and farmers to develop the crop subsector. In the long term, the framework would be basis for agricultural development and transformation. Harmonisation of different levels of laws and regulations would be beneficial for all the stakeholders to understand who is responsible for what (their jurisdiction). 		
2.6 Monitoring and evaluation for impact measurement			
(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> Numbers of existing laws and policies related to crop subsector Capacity of policy/law formulation of officers of MAFCRD 		
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> Numbers of existing laws and policies related to crop subsector Existence of legislative framework Capacity of policy/law formulation of officers of MAFCRD Availability of task teams and a monitoring committee Numbers of bills and policies drafted and submitted to parliament 		
(3) Methods of measurement and sources of information:	Policy documents, project reports, training materials and training records, drafted bills and policies submitted to the Parliament		
(4) Responsible parties for the monitoring and evaluation:	Members of the monitoring committee (Responsible officers of Directorate of Planning and Agriculture Economics and responsible officers from the related Directorates and Ministries)		
2.7 Required human resources			
(1) Principle of human resources management:	Capacity building of concerned officers of MAFCRD for analysis, formulation, and knowledge of the legislative process (from policy to enforcement) will be the most crucial factor for the success of the project.		
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> Project manager from MAFCRD (one senior staff from the MAFCRD, Directorate of Planning and Agriculture Economics, grade 3 or 4) to supervise and manage the project implementation Project staff from MAFCRD (three staff from any of the concerned Directorates) for project detailed design, conduct of needs assessment, project implementation and management, logistics, and monitoring, etc. Director or deputy director of the state Ministry of Agriculture (all states) should be assigned as a focal point to support the above project team to implement the project. 		
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Consultants in the field of:</p> <ul style="list-style-type: none"> Project management (Master's degree, 15-years experience): One Expert for policy formulation (BA or BSc, 10-years experience or more): One Training and project coordinator (BA in Agriculture desirable, 7-years experience or more): One Expert for intellectual property rights (BA or BSc, 10-years experience or more): One Expert for labour market or economic analysis (BA or BSc, 10-years experience or more): One 		

Items	Information
	<ul style="list-style-type: none"> • Expert for quality and safety standards of crop products (BA or BSc, 10-years experience or more): One Training will be provided at CTC Yei.

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	<table border="1"> <tr> <td>M</td> <td>L: Low</td> <td>M: Medium</td> <td>H: High</td> <td>(select an indicator from the list)</td> </tr> </table>	M	L: Low	M: Medium	H: High	(select an indicator from the list)
M	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	Failure to get feedback from officers of state, county, payam, and boma offices about the existing policies and laws. Possible interference by persons and/or groups whose vested interests could be restricted by establishing a comprehensive legislative framework.					

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	<p>Inter-Ministerial collaborations are necessary since the policies and laws cover areas beyond MAFCRD. Harmonisation of laws and policies among the national, state and local levels may take time. Officers at the state, county, payam, and boma levels may have a difficult time to understand and accept all the existing policies and laws; they probably have not received prior information about them. Time management would be critical to complete this component.</p> <p>Formulation of bills and policies to fill gaps in the legislative framework may also be time consuming. Activities related to the 4th component needs to take place immediately after the training is conducted.</p> <p>Close collaboration with the project staff and government officers engaged in the "Enhancement of laws and regulations enforcement project" would be important to ensure that laws/regulations are enforced.</p>
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	Periodic reviews of laws and policies need to be undertaken. How the legislative framework functions and the legislative process itself should be monitored. Both activities are conducted by the monitoring committee composed of responsible officers of MAFCRD and/or other ministries with support from the project team. Periodic meetings should be held every other month.
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Part 3: Project cost estimation

Project duration	SSP/USD = 4												Total	% to total															
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27			27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000	Total
1 Management and operation of project	2,991	2,999	2,855																								8,844	2,211	100%
1 Deployment of government staff		68																									68	17	1%
1 Harmonise meetings (per diem)		41																									41	10	0%
2 Harmonise meetings (transportation)		27																									27	7	0%
2 Procurement of administrative services (contracted)	2,916	2,376	2,376																								7,668	1,917	87%
1 International consultant (project manager)	756	756	756																								2,268	567	26%
2 International consultant (policy formulation)	540	540	540																								1,620	405	18%
3 International consultant (training and project coordinator)	540	540	540																								1,620	405	18%
4 International consultant (intellectual property rights)	360	180	180																								720	180	8%
5 International consultant (labour market and economic analysis)	360	180	180																								720	180	8%
6 International consultant (quality & safety standard of crop products)	360	180	180																								720	180	8%
4 Implementation of staff training	75	555	479																								1,109	277	13%
1 Meetings for development of draft legislative framework (per diem)	30																										30	8	0%
2 Periodical meetings for review (per diem)	45																										90	23	1%
3 Harmonise meetings at states (per diem)	450																										450	113	5%
4 Harmonise meetings at states (transportation)	60																										60	15	1%
5 Workshop for development of training contents (per diem)			23																								23	6	0%
6 Trainings for government officers at Yei (per diem)			180																								180	45	2%
7 Trainings for government officers at Yei (transportation)			60																								60	15	1%
8 Workshops to review and finalize bills and policies			216																								216	54	2%
5 Implementation of research, studies and surveys																													
6 Delivery of extension and training services to the private sector																													
7 Operation and maintenance																													
2 Construction of infrastructure and procurement of equipment																													
1 Construction of office buildings																													
2 Construction of research, training and other specialized buildings																													
3 Construction of feeder roads																													
4 Construction of production, market and transportation facilities																													
5 Acquisition of land																													
6 Procurement of vehicles																													
7 Procurement of equipment																													
3 Subsidies, equity and loans																													
1 Provision of cash and/or in-kind subsidies																													
2 Provision of training services to the private sector																													
3 Equity investments																													
4 Provision of loans																													
5 Social assistance/donation (Emergency)																													
Total (SSP '000)	2,991	2,999	2,855																								8,844	2,211	100%
Total (USD '000)	748	750	714																								2,211		
% to total	34%	34%	32%																								100%		

Public sector project
Routine work by government
Private sector project
Routine work by private sector

2.4.35 Enhancement of laws and regulations enforcement project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Crop		
(2) Project name:	Enhancement of laws and regulations enforcement project		
(3) Project ID:	0 1 3 5 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2016/17	Ending FY: 2025/26	Duration (years): 10
(5) Total investment:	SSP 11,701,000	USD 2,925,000	Note: Not including recurrent cost
(6) Name of this file (automatic):	CAMP Project profile format v9.1.docx		

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		CR.SA1	Policy and legal framework development	Table 2-3
(2) Government organisation:	13	MAF-AE	Directorate of Planning and Agriculture Economics	Table 2-6
	01	MAF-AF	Directorate of Administration and Finance	Table 2-6
(3) Activity types:	101	ID-LI	Institutional development – Legal and institutional development	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	X
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
	(4) Objective time horizon:	01	ST	Short-term (less than 5 years)
02		MT	Medium-term (5 to 10 years)	X
03		LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

Legislation is lawmaking; the legislative process is a series of steps that a legislative body takes to evaluate, amend, and vote on proposed legislation. In South Sudan most legislation is enacted by the national and state assemblies. Implementation of legislation is left to other entities, such as law enforcement agencies, the courts, community leaders, and other government agencies. Typically the government 1) formulates a policy, 2) passes laws to implement the policy, 3) provides additional regulations, and 4) finally enforces it.

The “Establishment of firm legislative framework project” will address the the first 3 components of the legislative framework:: 1) policy framework, 2) legal framework, 3) regulatory framework. The enforcement framework is addressed in this project.

Currently enforcement of laws and regulations is weak. Also, there are several areas that lack laws and regulations, which means that legislation in the form laws and regulations needs to be developed to cover the gaps.

If enforcement remains weak or non-existent in the agriculture sector, the development of laws and regulations is meaningless. Proposed legislation to improve quality and production volumes, and reduce production losses will not be enforced and the desired results of the legislation not achieved. Strengthening enforcement of laws and regulations concerning crops would generally raise the credibility of South Sudan and its crop products.

In order to strengthen enforcement functions, an enforcement framework is necessary. The system should include clear rules and procedures describing how laws and regulations will be enforced (inspection procedures, non-compliance penalties etc.). The responsibilities of the relevant Directorates and/or Departments will be defined. Enforcement needs guidelines and manuals at the implementation level. Since different Directorates are responsible for enforcing different laws and regulations, a coordination committee of the different Directorates of MAFCRD and other related institutions would be useful to standardise procedures and share information about enforcement of laws and regulations.

Building the enforcement capacity of government enforcement officers is essential. Also, ensuring that farmers, the private sector, aid organisations etc. understand the new and existing laws and regulations is necessary for efficient enforcement. Laws and regulations may need to be created or strengthened.

(2) Objectives:

Major objective of the project is to enhance the enforcement of laws and regulations related to the crop subsector. Other detailed objectives of the project follow.

- An enforcement framework of rules and procedures, and institutional arrangements will be made to strengthen the enforcement system, based on the current institutional settings and capacity of MAFCRD.
- The project will ensure details including procedures, guidelines, penalties for enforcing laws and regulations will be developed and implemented.
- A monitoring and evaluation system for the laws and regulations enforcement will be established.

(3) Overall description including temporal and spatial extent of project:

Firstly, a review of existing laws, regulations, and rules and procedures will examine current enforcement functions and analyse causes of non-compliance and weak enforcement. A regulatory framework will be developed and rules and procedures established. Institutional arrangements, including establishment of an enforcement body, need to be made in the early part of the project, in the first and the second year.

Developing guidelines and manuals would be important activities. These will be used to make government officers, farmers, agro-input providers, traders, wholesalers, and other stakeholders aware of the rules and regulations related to agricultural products. To assist in this, training will be provided to them. These activities will be done from the early to the middle periods of the project.

Monitoring and evaluating needs to be performed on: compliance with the rules and regulations; functionality of the enforcement framework, effectiveness of guidelines and manuals, impact of training contents and materials etc. A monitoring and evaluation system needs to be developed early in the project. Monitoring and evaluation will continue to the end of the project, by which time it needs to become routine work for the government.

Items	Information
(4) Component and activity structure:	<p>In the early years of the project, MAFCRD and a coordination committee will be the main implementing bodies of enforcement, due to the limited capacity of the state governments. During the project period, the capacity of state staff responsible for enforcement will be improved; in the mid to long term, enforcement functions (inspections etc.) will be moved from the national to the state level. The project team will provide support for these activities.</p> <p>Full and effective enforcement of all laws and regulations may take time. A gradual approach to enforcement needs to be taken. Priorities will need to be established, criteria may be certain laws and regulations, directorates and/or departments, or geographical areas. These priorities need to be discussed once the project is started.</p> <p>Component 1: Establishment of enforcement framework Component 2: Develop guidelines and manuals and training courses for enforcement of existing laws and regulations Component 3: Provide training on enforcement activities Component 4: Support implementation of laws and regulations enforcement Component 5: Conduct monitoring and evaluation for enforcement activities</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Establishment of enforcement framework</p> <p>Activity 1.1: Review existing laws, regulations, and rules and procedures to examine current enforcement functions; analyse causes of non-compliance and weak enforcement; clarify responsible directorates and their functions Outputs: Current enforcement environment described.</p> <p>Activity 1.2: Develop an enforcement framework, including penalties for non-compliance and rules and procedures for enforcement of laws and regulations Outputs: Enforcement framework including sampling methods, penalties and enforcement procedures; clarified roles of both national and state level government bodies; schedule for moving enforcement functions (inspection etc.) to the states</p> <p>Activity 1.3: Establish institutional arrangements to ensure enforcement of laws and regulations Outputs: Coordination committee with members from responsible directorates and departments with clear responsibilities/information channels etc., enforcement unit in all directorates and departments with enforcement responsibilities (both national and state)</p> <p>Activity 1.4: Support the coordination committee to hold periodic meetings with key staff from other related projects Outputs: Shared information and discussions with key staff of other related projects ("Quality standards and quality control for agricultural products project", "Enhancement of private sector agro-input providers project," and "Establishment of a National Phytosanitary System project."); better coordination of enforcement activities from these projects</p> <p>Activity 1.5: Support the coordination committee to interact with governments from neighbouring countries and international organisations to learn about enforcement of laws and regulations Outputs: The coordination committee with knowledge about enforcement of laws and regulations in neighbouring countries</p> <p>Component 2: Develop guidelines and manuals and training courses for enforcement of laws and regulations</p> <p>Activity 2.1: Decide on priority laws and regulations to strengthen enforcement Outputs: Priority laws and regulations identified by the coordination committee</p> <p>Activity 2.2: Develop guidelines and manuals for the priority laws and regulations Outputs: Guidelines and manuals for enforcement of laws and regulations</p> <p>Activity 2.3: Develop training content and material; with practices for trainers Outputs: Training becomes ready to conduct regarding enforcement of laws and regulations (will be used in component 3)</p> <p>Component 3: Provide training on enforcement activities</p> <p>Activity 3.1: Conduct training for government officers Outputs: Trained officers of MAFCRD, state government officers, staff of National Bureau of Standards (NBS), staff of training centres and research centres, agricultural extension officers (AEOs), community development officers (CDOs), Cooperative officers (COs), enforcement officers in county, payam, and boma offices</p> <p>Activity 3.2: Conduct training for key staff of UN agencies, NGOs, aid organisations and community development extension workers (CBEWs), Outputs: Trained staff of UN, major NGOs, major aid organisations and CBEWs</p> <p>Activity 3.3: Conduct training for major private business owners, traders, wholesalers,</p>

Items	Information
	<p>selected farmers Outputs: Trained business owners such as agro-input providers, tractor service providers, traders, wholesalers, and selected farmers.</p> <p>Component 4: Support implementation of laws and regulations enforcement Activity 4.1: Support responsible national directorates and/or departments to implement enforcement of laws and regulations according to the priorities set by the coordination committee Outputs: Laws and regulations enforced by MAFCRD Activity 4.2: Support movement of enforcement functions responsible state units and/or departments Outputs: Enforcement functions done at the state level according to the enforcement framework, rules, and guidelines developed</p> <p>Component 5: Conduct monitoring and evaluation for enforcement activities Activity 5.1: Visit offices of responsible directorates and enforcement sites by type (food standard, pesticides, fertilisers, packaging, etc.) for monitoring Outputs: Monitoring and evaluation report to provide supervision and analysis made for improvement Activity 5.2: Provide suggestions and information for improvement of framework, rules, procedures, institutional arrangements, guidelines, manuals, training contents and materials to the coordination committee Outputs: Improved enforcement functions</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	Responsible directorates for enforcement of laws and regulations at the national level, responsible unit and/or department at the state level, and NBS
(2) Description of beneficiaries within the framework of the project:	Consumers, farmers, private business owners, traders, wholesalers, concerned government officers

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<ul style="list-style-type: none"> • Improved government enforcement functions of laws and regulations related to crop • Better compliance by stakeholders • Better quality and volumes of crop products • Better impression of crop products of South Sudan
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable) N/A

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td> Negative: c Positive: d </td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: c Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: c Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • This project will not require construction of any facilities so it is not expected to have negative environmental impacts. However, enforcing laws and regulations could be resisted by affected farmers and the private sector. They would be reluctant to comply with the laws and regulations. A gradual approach for enforcement with sufficient explanations would be critical to implement enforcement. <p>(Positive)</p> <ul style="list-style-type: none"> • If enforcement of laws and regulations was enhanced to ensure compliance across the country, not only the reputation of South Sudanese crops would be improved but also quality and production volumes could be improved. It may lead to more business opportunities for farmers and the private sector. 		

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • Existing framework and system for enforcement of laws and regulations related to crop • How well are the existing laws and regulations complied with
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • Existing framework and system for enforcement of laws and regulations related to crop • How well are the existing laws and regulations complied with • Number of government staff who have better knowledge and skills for laws and regulations enforcement • Number of farmers and people of the private sector who have better knowledge and skills for laws and regulations enforcement • Number/areas that were enforced
(3) Methods of measurement and sources of information:	Assessment report, project report, guidelines, manuals, training materials, and training records, monitoring and evaluation report
(4) Responsible parties for the	Directorate of Planning and Agriculture Economics

Items	Information					
monitoring and evaluation:						
2.7 Required human resources						
(1) Principle of human resources management:	A large number of people need to understand laws and regulations, enforcement criteria and procedures; this will be critical for the success of the project. Obtaining appropriate skills among the enforcement officers will also be essential for effective enforcement of laws and regulations.					
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> • Project manager from MAFCRD (one senior staff from the MAFCRD, Directorate of Agricultural Production and Extension Services, grade 3 or 4) • Project staff from MAFCRD (two staff from the Directorate of Agricultural Production and Extension Services) for project detailed design, conduct of needs assessment, project implementation and management, procurement, logistics, and monitoring, etc. • One senior inspector and another inspector with lower grade in each state Ministry of Agriculture (Two staff from each state from the state Ministry of Agriculture should be assigned and support the above project team to implement the project.) • Staff from NBS - one staff with appropriate knowledge about food quality and safety should be assigned should support this project as a focal person. 					
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Consultants in the field of:</p> <ul style="list-style-type: none"> • Project management (Master's degree, 15-years experience): One • Expert for enforcement of laws and regulations (BA or BSc, 10-years experience or more): One • Training and project coordinator (BA in Agriculture desirable, 7-years experience or more): One • Expert for quality control of agricultural products (BA or BSc, 10-years experience or more): One • Expert for agricultural seed (BA or BSc, 10-years experience or more): One • Expert for plant protection or agro-inputs (BA or BSc, 10-years experience or more): One <p>Training will be provided at government training centres. Assessment for enforcement of laws and regulations will be conducted by the project staff. No outsourcing to local consulting company and/or NGOs would be expected.</p>					
2.8 Risk assessment with respect to project objectives and resources to be applied						
(1) Expected level of risk:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; text-align: center;">M</td> <td style="width: 25%; text-align: center;">L: Low</td> <td style="width: 25%; text-align: center;">M: Medium</td> <td style="width: 25%; text-align: center;">H: High</td> <td style="text-align: right;">(select an indicator from the list)</td> </tr> </table>	M	L: Low	M: Medium	H: High	(select an indicator from the list)
M	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	Compliance of laws and regulations fully may take time. The strategy and timing of adopting penalties must be carefully considered since it requires fines for violators and there is no history of penalties of this kind in South Sudan. Some people may resist accepting the enforcement of laws and regulations. Large numbers of people need to understand the importance of laws and regulations and compliance.					
2.9 Other special considerations and/or notes						
(1) Other special considerations and/or notes:	<p>This project is related to the <u>"Quality standards and quality control for agricultural products project"</u>, <u>"Enhancement of private sector agro-input providers project,"</u> and <u>"Establishment of a National Phytosanitary System project."</u> These projects have components concerning establishment of regulatory frameworks, development of standards, guidelines, procedures for quality control and/or enforcement of quality control for each subject area. Thus, close coordination with these projects will be very important to share information as well as to avoid duplication of work. The coordination committee should play a role to hold periodic meetings with concerned people, including project staff, to exchange information on how to better enforce laws and regulations.</p>					
2.10 Routine operation and required resources after the completion of the project						
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>Conducting monitoring and evaluation (M&E) should be routine activities for the Directorate of Planning and Agriculture Economics and other responsible Directorates and/or Departments by MAFCRD.</p> <p>Results of M&E should be utilised by the coordination committee for improvement of the framework, rules, procedures, institutional arrangements, guidelines, manuals, training contents and materials; this will be a continuous process.</p> <p>Costs for M&E need to be made part of the budget of concerned Directorates and Departments during the project.</p>					

01.35 Enhancement of laws and regulations enforcement project (cont.)

SSP/USD = 4

Project duration	SSP/USD = 4												Total SSP '000 USD '000	% to total														
	Phase 1			Phase 2			Phase 3			Phase 4																		
Cost group	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	Total	% to total	
6 Procurement of vehicles																												
7 Procurement of equipment																												
3 Subsidies, equity and loans																												
1 Provision of cash and/or in-kind subsidies																												
2 Provision of training services to the private sector																												
1 Trainings for business owners (per diem)																												
2 Trainings for business owners (transportation)																												
3 Equity investments																												
4 Provision of loans																												
5 Social assistance/donation (Emergency)																												
T total (SSP '000)	2,781	4,335	3,813	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	558	
Total (USD '000)	695	1,084	953	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	139	
% to total	24%	37%	33%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	5%	

Public sector project
Private sector project
Routine work by government
Routine work by private sector

3. Livestock Subsector

3.1 Investment Planning Space

3.1.1 Investment Planning Space by Development Theme

Subsector	Development Theme Project ID Project name	Phase												Year	SSP ('000)	USD ('000)	Respon- sibility
		Phase I 2015/16 2016/17 2017/18 2018/19 2019/20 2020/21 2021/22 2022/23 2023/24 2024/25	Phase II 2025/26 2026/27 2027/28 2028/29 2029/30 2030/31 2031/32 2032/33 2033/34 2034/35 2035/36 2036/37 2037/38 2038/39 2039/40	Phase III	Phase IV												
02 Livestock Subsector															371,476	92,869	
T1 Reconstruction and recovery															21,946	5,487	
02.01	Grazing allotments and land-tenure project													10	5,533	1,383	NNS/S/SC
02.02	Livestock census, disease surveillance and information management project													3	6,673	1,668	NS
02.03	National and State livestock policy and legal framework establishment and maintenance project													8	9,740	2,435	NS
T2 Food and nutrition security															169,102	42,276	
02.04	Creation of animal diagnostic laboratories, early disease response, and quarantine system project													10	43,937	10,984	NS
02.05	Development of a central and regional veterinary drug stores project													10	6,926	1,731	NS
02.06	Development of feed testing and analysis laboratory project													10	7,462	1,865	PPP
02.07	Development of livestock marketing project													5	5,456	1,364	PPP
02.08	Development of livestock water catchment and watering areas project													10	16,833	4,208	NNS/S/SC
02.09	Formulation of animal health and disease control plan project													10	4,322	1,080	NS
02.10	Veterinary services delivery project													5	84,167	21,042	NS
T3 Economic growth and livelihood improvement															81,372	20,343	
02.11	Beekeeping extension project													7	3,207	802	PPP/P
02.12	Dairy production and processing extension project													10	3,505	876	NS/PPP
02.13	Development of feed mills project													10	8,406	2,102	PPP/P
02.14	Forage crops production project													8	2,374	593	PPP/P
02.15	Hides and skins processing extension project													8	6,577	1,644	PPP/P
02.16	Livestock auction facility improvement and management project													5	35,611	8,903	NS
02.17	Livestock harvest facilities improvement and management project													7	5,224	1,306	PPP/P
02.18	Livestock identification and traceability project													5	2,912	728	N
02.19	Meat production and processing extension project													10	4,886	1,221	PPP/P
02.20	Pig production extension project													10	4,403	1,101	NS
02.21	Poultry production and processing extension project													10	4,266	1,067	NS
T4 Agriculture sector transformation															18,964	4,741	
02.22	Enhancement of demonstration farms project													10	12,453	3,113	NS
02.23	Enhancement of livestock producer associations project													6	626	156	NS
02.24	Rangeland management project													10	5,885	1,471	NNS/S/SC
T5 Institutional development															80,092	20,023	
02.25	Creation of livestock research centers project													10	8,414	2,104	NS
02.26	Development of livestock extension systems including community animal health workers project													10	18,726	4,681	NS
02.27	Enhancement of inter-government, donor agencies, civil society, and private sector coordination project													5	94	23	N
02.28	Livestock public sector institutions capacity development project													10	52,858	13,215	NS

Note: N: National government; S: State government; P: private sector
PPP: Public and private sector partnership

3.2 Summary of funding requirement

3.2.1 Summary of project cost and scaling-up cost

Subsector	Development Theme Project ID	Project name	SSP/USD = 4.00											
			Phase I	Phase II	Phase III	Phase IV	SSP (million)	USD (million)						
00	CAMP Investment Plan total	Project cost	15/16 16/17 17/18 18/19 19/20 20/21 21/22 22/23 23/24 24/25	25/26 26/27 27/28 28/29 29/30	30/31 31/32 32/33 33/34 34/35 35/36 36/37 37/38 38/39 39/40									
		Scaling-up cost	130.6 178.1 333.0 322.9 299.5	316.6 316.4 284.3 255.3 262.2	233.0 204.9 113.1 97.4 115.7	76.4 71.6 66.0 78.9 66.6 61.4 76.6 60.2 46.0 45.4	4,112.1	1,028.0						
		Grand total	0.1 2.2 3.1 13.1 23.5	53.4 74.7 89.8 80.8 90.4	213.0 203.8 360.2 374.4 329.1	469.5 505.4 545.6 513.6 581.9 660.0 689.5 823.6 863.7 915.1	8,485.3	2,121.3						
		Project cost	130.7 180.2 336.1 336.1 323.0	370.0 391.1 374.0 336.1 352.6	446.0 408.8 473.2 471.8 444.8	545.9 577.0 611.6 592.4 648.5 727.4 766.1 883.8 909.7 960.5	12,597.3	3,149.3						
		Scaling-up cost	8.0 8.8 7.1 7.0 5.7	62.2 62.5 63.4 41.9 35.9	25.2 16.4 7.8 7.6 6.6	1.1 1.1 1.1 1.1 1.1 1.1	371.5	92.9						
		Subsector total	8.0 8.8 7.1 10.3 10.5	67.1 69.0 69.8 52.5 46.4	92.2 75.6 58.0 56.7 55.7	96.5 105.2 105.2 92.8 98.5 132.7 128.2 131.4 136.4 162.4	1,877.0	469.2						
		Project cost	7.9 8.8 3.8 0.2 0.2	0.2 0.2 0.2 0.2 0.2			21.9	5.5						
		Scaling-up cost	3.2 4.8	4.8 6.5 6.4 8.3 8.2	11.1 9.3 8.0 8.0 8.0	8.0 8.1 8.2 8.6 9.0 10.0 10.2 10.6 11.1 13.3	183.6	45.9						
		Theme total	7.9 8.8 3.8 3.5 5.0	5.0 6.7 6.6 8.5 8.4	11.1 9.3 8.0 8.0 8.0	8.0 8.1 8.2 8.6 9.0 10.0 10.2 10.6 11.1 13.3	205.6	51.4						
		Project cost	1.6 2.3 0.4 0.2 0.2	0.2 0.2 0.2 0.2 0.2			5.5	1.4						
Scaling-up cost	1.6 2.3 0.4 0.2 0.2	0.2 0.2 0.2 0.2 0.2	3.0 2.2 1.9 1.9 1.9	1.9 1.9 1.9 2.0 2.1 2.7 2.4 2.5 2.6 3.1	34.2	8.5								
Project total	3.5 3.1		3.0 2.2 1.9 1.9 1.9	1.9 1.9 1.9 2.0 2.1 2.7 2.4 2.5 2.6 3.1	39.7	9.9								
Project cost		Project cost												
Scaling-up cost		Scaling-up cost												
Project total		Project total												
Project cost		Project cost												
Scaling-up cost		Scaling-up cost												
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Project total		Project total												

Subsector	Development Theme Project ID Project name	SSP/USD = 4.00																														
		Phase I			Phase II			Phase III			Phase IV			SSP	USD																	
		15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	(million)	(million)				
02.10	Veterinary services delivery project	Project cost				22.1	16.1	16.1	16.1	13.6																		84.2	21.0			
		Scaling-up cost									34.5	30.2	25.9	25.9	25.9	25.9	25.9	25.9	25.9	26.7	27.6	29.3	31.1	32.8	34.5	36.2	43.1	455.5	113.9			
		Project total																														
T3 <u>Economic growth and livelihood improvement</u>	Project cost										7.6	1.6	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	20.3		
		Scaling-up cost									18.5	17.1	14.2	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1
		Theme total																														
02.11	Beekeeping extension project	Project cost				1.9	1.4	0.0	0.0	0.0	0.0																					
		Scaling-up cost									2.4	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
		Project total																														
02.12	Dairy production and processing extension project	Project cost				1.7	1.4	0.2	0.0	0.0																						
		Scaling-up cost									0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		Project total																														
02.13	Development of feed mills project	Project cost									1.3	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	
		Scaling-up cost									1.3	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	
		Project total																														
02.14	Forage crops production project	Project cost				1.7	0.6	0.0	0.0	0.0	0.0																					
		Scaling-up cost									1.8	1.6	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	
		Project total																														
02.15	Hides and skins processing extension project	Project cost				1.6	2.8	1.4	0.7	0.0	0.0	0.0																				
		Scaling-up cost									2.3	2.0	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	
		Project total																														
02.16	Livestock auction facility improvement and management project	Project cost				2.9	2.7	10.5	9.8	9.8																						
		Scaling-up cost									12.0	12.4	10.1	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	
		Project total																														
02.17	Livestock harvest facilities improvement and management project	Project cost									4.5	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
		Scaling-up cost									4.8	4.8	5.0	5.1	5.5	5.8	6.1	6.4	6.7	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
		Project total																														
02.18	Livestock identification and traceability project	Project cost									1.8	0.6	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
		Scaling-up cost									1.7	2.0	1.4	1.5	1.5	2.0	2.5	1.8	1.9	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
		Project total																														
02.19	Meat production and processing extension project	Project cost				1.0	2.2	1.0	0.6	0.0																						
		Scaling-up cost									4.4	4.4	4.6	4.7	5.0	5.3	5.6	5.9	6.2	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	
		Project total																														
02.20	Pig production extension project	Project cost				2.2	0.6	1.0	0.5	0.0																						
		Scaling-up cost									2.7	2.7	2.8	2.9	3.1	3.2	3.4	3.6	3.8	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
		Project total																														
02.21	Poultry production and processing extension project	Project cost				2.0	1.7	0.3	0.3	0.0																						
		Scaling-up cost									1.8	1.8	1.9	1.9	2.1	2.2	2.3	2.4	2.6	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
		Project total																														

3.3 Project Location Map

Nation-wide Projects

- 02.01 Grazing allotments and land-tenure project
- 02.02 Livestock census, disease surveillance and information management project
- 02.03 National and State livestock policy and legal framework establishment and maintenance project
- 02.04 Creation of animal diagnostic laboratories, early disease response, and quarantine system project
- 02.05 Development of a central and regional veterinary drug stores project
- 02.06 Development of feed testing and analysis laboratory project
- 02.08 Development of livestock water catchment and watering areas project
- 02.09 Formulation of animal health and disease control plan project
- 02.10 Veterinary services delivery project
- 02.11 Beekeeping extension project
- 02.12 Dairy production and processing extension project
- 02.14 Forage crops production project
- 02.16 Livestock auction facility improvement and management project
- 02.18 Livestock identification and traceability project
- 02.21 Poultry production and processing extension project
- 02.23 Enhancement of livestock producer associations project
- 02.24 Rangeland management project
- 02.26 Development of livestock extension systems including community animal health workers (CAHWs) project
- 02.27 Enhancement of inter-government, donor agencies, civil society, and private sector coordination project

**States Projects
(Upper Nile, Western
Bahr el Ghazal,
Central Equatoria)**

- 02.15 Hides and skins processing extension project
- 02.25 Creation of livestock research centers project

States Projects (Upper Nile, Warrap, Lakes, Eastern Equatoria)

- 02.17 Livestock harvest facilities improvement and management project
- 02.19 Meat production and processing extension project

**States Project
(Upper Nile,
Northern Bahr
el Ghazal,
Western
Equatoria,
Central
Equatoria)**

- 02.13 Development of feed mills project

**States Project
(Upper Nile,
Central
Equatoria,
Eastern
Equatoria)**

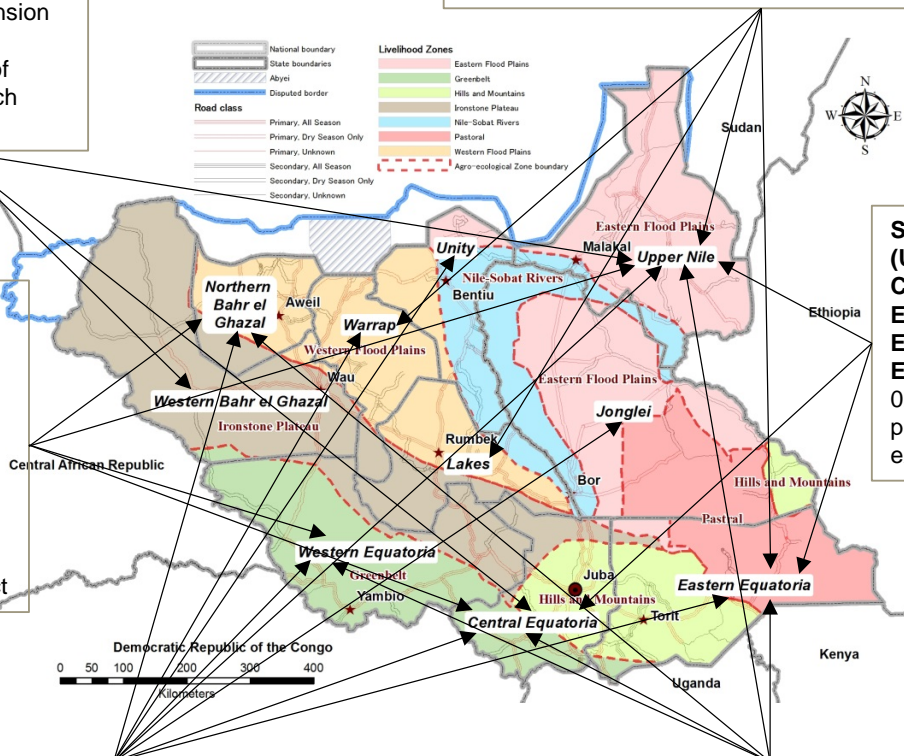
- 02.20 Pig production extension project

**States Project (Upper Nile, Jonglei, Unity, Warrap,
Northern Bahr el Ghazal, Western Equatoria,
Central Equatoria, Eastern Equatoria)**

- 02.07 Development of livestock marketing project

**States Project (Upper Nile, Northern Bahr el Ghazal,
Western Equatoria, Central Equatoria, Eastern
Equatoria)**

- 02.22 Enhancement of demonstration farms project



3.4 Project Profiles

3.4.1 Grazing allotments and land-tenure project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Livestock		
(2) Project name:	Grazing allotments and land-tenure project		
(3) Project ID:	0 2 0 1 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2015/16	Ending FY: 2024/25	Duration (years): 10
(5) Total investment:	SSP 5,533,000	USD 1,383,000	Note: Not including recurrent cost

1.2 Project characteristics:

	Code	Abbreviation	Description	Reference
(1) Subsector area:		LS.SA1	Policy and legal framework development	Table 2-3
(2) Government organisation:	05:08	MLFI-AP;EX	Directorate of Animal Production and Range Management/Directorate of Livestock and Fisheries Extension	Table 2-6
	01	MLFI-PL	Directorate of Planning	Table 2-6
(3) Activity types:	101	ID-LI	Institutional development- Legal and institutional development	Table 2-12
	103	ID-PP	Institutional development- Policy formulation and planning	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	X
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	X
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	X
	03	SP	State project	X
	04	SC	State-County project	X
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:	Years of conflict have displaced tens of thousands of families. With this displacement and the eventual return of families to their lands there will be a substantial need for legislation and policies on land-tenure and ownership. Those that will suffer the most with land issues include women, those who left their land and are returning, and IDP's. There have been two pieces of legislation that have helped address land tenure in South Sudan. Those are the Land Act in 2009 and Land Policy adopted in 2013. Even with these policies in place, land administration and enforcement are weak due to continuing lack of overall infrastructure and on-going conflict. South Sudan has enormous potential when it comes to livestock grazing. However, this potential will never be reached until a comprehensive, inclusive land tenure policy is established and more importantly enforced. It is essential however that grazing rights and allotments are developed so that rangelands are allowed to recover after grazing. Proper range management, grazing allotments, timing of grazing, and number of animal units allowed to graze a particular range area are necessary to maintain quality rangeland to supply the nutrient needs of livestock. Clearly demarcated, concise grazing allotments could also help to avoid future conflict because livestock producers will know when and where their livestock should be grazing and therefore not infringe on another producer's grazing rights. Along with the legal policies of grazing allotments and land tenure should be comprehensive range management policies enforced by government livestock or land officers. This project will focus on the review, amending, and development of policy and legislation.
(2) Objectives:	To review and revise current land tenure and grazing allotment policies for South Sudan. A comprehensive policy for the livestock sector concerning land-tenure rights and grazing allotment policies with a review and enforcement process.
(3) Overall description including temporal and spatial extent of project:	The project is to review the current sector and subsector policy; develop and/or amend policy to align with strategic goals; enhance laws and regulations governing land tenure and grazing allotments; develop range management and improvement protocols for grazing lands, and develop enforcement policies for grazing rights and land ownership. The implementation of rangeland management and grazing methods will be covered more completely in the CAMP "rangeland management project".
(4) Component structure:	Component 1: Review all national and local policies. Component 2: Develop comprehensive sector policy. Component 3: Harmonize policy with OIE and surrounding countries. Component 4: Harmonize national policy with states and local stakeholders. Component 5: Develop a regulatory and enforcement branch of government. Component 6: Develop food safety and grades and standards regulations. Component 7: Develop a policy review process with recognized information channels.

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1: Policy review Activity 1.1: Natural Resource sector policy review Activity 1.2: Livestock sector review Activity 1.3 State livestock policy review Outputs: Comprehensive and transparent review of existing policy documents outlining land rights and grazing allotments.</p> <p>Component 2: Develop comprehensive land tenure and grazing allotment policies Activity 2.1: Natural Resource sector Activity 2.2: Livestock sector Activity 2.3 Rangeland or pastoral sector Outputs: Comprehensive policy document outlining land rights and grazing allotments.</p> <p>Component 3: Harmonization with World Organisation for Animal Health (OIE) and surrounding countries. Activity 3.1: Work with OIE to ensure harmonization of national policy with international policy Activity 3.2: Work with Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN) to harmonize regional policy with surrounding countries. Outputs: Policies that are harmonized with OIE and surrounding countries.</p> <p>Component 4: Harmonization between national and state policies Activity 4.1: Harmonize national and state policy. Activity 4.2: Harmonize national, state and local (tribal) policy Outputs: National and state policies and responsibilities are harmonized.</p> <p>Component 5: Develop a regulatory branch that ensures compliance and enforces laws. Activity 5.1: Develop and harmonize a national and state agency that ensures</p>
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Items	Information
	<p>enforcement of policies. Activity 5.2: Develop a protocol of penalties when individuals, companies and other groups fail to follow policy, including imprisonment and fines. Outputs: A national and state recognized regulatory and enforcement agency is implemented.</p> <p>Component 6: Develop range management protection, preservation, and best practice standards to ensure sustainable use of grazing lands for livestock Activity 6.1: Develop policy. Activity 6.2: Harmonize policy with state and local governments. Activity 6.3: Develop oversight process that reviews and certifies standards. Outputs: A published document with best practice ideas for range management protection, preservation, and grazing standards to ensure sustainable use of grazing lands for livestock.</p> <p>Component 7: Standardize review mechanisms and information channels. Activity 7.1: Outline review process and share with all stakeholders. Activity 7.2: Establish a regulatory body that reviews standards and enforces laws and regulations. Outputs: A published and understood policy review process with transparent information channels available to all stakeholders.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	The service providers will be primarily international policy experts in range management and livestock.
(2) Description of beneficiaries within the framework of the project:	Producers and consumers of South Sudan. Policies will be harmonized for all producers to ensure protection and advancement of the industry. The harmonized policy will ensure safe protein supplies for all consumers.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	Standardized, internationally accredited land tenure and grazing policies and regulations with a transparent enforcement system and a transparent system for input and change. It is essential that this project is organized and then implemented in conjunction with the CAMP "rangeland management project".
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: a Positive: d</td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: a Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: a Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • No known negative environmental and social impact for this project. <p>(Positive)</p> <ul style="list-style-type: none"> • Standardization of land tenure and grazing allotment policies will have a positive and significant impact on the environment because the policies will be developed to ensure that the rangeland environment is improved, monitored, and rehabilitated when needed. Furthermore the standardized policies will allow for healthier rangelands which will also improve riparian areas, improving water quality for rivers and lakes. 		

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	• Lack of focused and harmonized internationally accepted policy document.
(2) Measurable indicators and situation at the end point:	A harmonized internationally accepted policy document focused on land tenure, grazing allotments, and range management.
(3) Methods of measurement and sources of information:	• Recorded and shared policy document.
(4) Responsible parties for the monitoring and evaluation:	• Directorate of Animal Production; Directorate of Livestock and Fisheries Extension; Directorate of Planning

2.7 Required human resources

(1) Principle of human resources management:	Senior staff need the ability to write function policy and regulations for this sector. They need a general understanding of the sector in addition to training in policy and regulation development, for example, a background in law and land legislation. They need to communicate with industry experts and work with International staff and agencies to write policy. They need support staff that maintains records and assists in routine activities.
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Items	Information
(2) Required human resources in the public sector (Positions, grades and numbers):	<p>The regulation division needs to have a background in monitoring and enforcement.</p> <ul style="list-style-type: none"> • 2- Senior grade administrators • 6- Senior grade policy developers – Large ruminants, small ruminants, water, range or pastoral management, environment, judicial • 10- Mid-grade administrative staff • 20 (2 for each state)- Conservation officers with enforcement and regulatory authority
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>International Policy experts in livestock affairs, land use and tenure, range management, environment to work with:</p> <ul style="list-style-type: none"> • World Organisation for Animal Health (OIE) • Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN)

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	<table border="1" style="width: 100%;"> <tr> <td style="width: 25%; text-align: center;">H</td> <td style="width: 25%; text-align: center;">L: Low</td> <td style="width: 25%; text-align: center;">M: Medium</td> <td style="width: 25%; text-align: center;">H: High</td> <td style="text-align: right;">(select an indicator from the list)</td> </tr> </table>	H	L: Low	M: Medium	H: High	(select an indicator from the list)
H	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	<p>Given the current situation with minimal focus on the subsector, this project could be delayed or not given resources to accomplish given tasks. It has the potential to have a significant impact on the livestock industry and grazing lands/environment but has many places in which approaches and regulations as well as enforcement can be negatively influenced.</p>					

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	<p>Transparency and high ethics are required for all individuals working in this sector.</p>
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>Human resources (on-going):</p> <ul style="list-style-type: none"> • 2- Senior grade administrators • 6-Senior grade policy developers – Large ruminants, small ruminants, water, range or pastoral management, environment, judicial • 10-Mid-grade administrative staff • 20 (2 for each state)- Conservation officers with enforcement and regulatory authority <p>Other on-going costs:</p> <ul style="list-style-type: none"> • Cost of maintaining archives • Cost of computers • Communication allowances (cell-phones and internet services) • Office maintenance • Record keeping costs • Transportation (vehicles and fuel) for staff to monitor rangeland quality and enforce grazing allotments
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Part 3: Project cost estimation

Project duration	SSP/USD = 4												Total	% to total																
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27			27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40			
1 Management and operation of project	1,375	2,088	377	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	4,719	1,180	85%	
1 Deployment of government staff	58	143	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	980	245	18%	
1 Regular meeting (per diem, etc.)	11																										11	3	0%	
2 Regular meeting (transportation)	18																										18	5	0%	
3 Regular meeting (per diem, etc.)	11																										11	3	0%	
4 Regular meeting (transportation)	18																										18	5	0%	
5 Workshop in state (per diem for central office staff)		41																									41	10	1%	
6 Workshop in state (transportation for central office staff)		45																									45	11	1%	
7 Regular meeting (per diem, etc.)		22																									22	5	0%	
8 Regular meeting (transportation)		36																									36	9	1%	
9 Review & enforcement seminar at state(per diem for staff)		16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	130	32	2%	
10 Review & enforcement seminar at state(transportation)		18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	144	36	3%	
11 Review & enforcement seminar at county(per diem for staff)		32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	253	63	5%	
12 Review & enforcement seminar at county(transportation)		32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	253	63	5%	
2 Procurement of administrative services (contracted)		400																									400	100	7%	
1 Publish documents		400																									400	100	7%	
3 Procurement of professional services (contracted)		1,260	1,512	252																							3,024	756	55%	
1 Policy expert in Livestock affair, land use and tenure		1,260	1,512	252																							3,024	756	55%	
4 Implementation of staff training		30	5																								35	9	1%	
1 Harmonization meeting at Juba (venue)		5																									5	1	0%	
2 Harmonization meeting at Juba (per diem, etc.)		1																									1	0	0%	
3 Harmonization meeting at Juba (transportation)		24																									24	6	0%	
4 Workshop in state (per diem for state officials)		5																									5	1	0%	
5 Implementation of research, studies and surveys																														
6 Delivery of extension and training services to the private sector																														
7 Operation and maintenance		28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	280	70	5%	
1 Office supplies in Juba		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	40	10	1%	
2 Office utilities & communication in Juba		10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	100	25	2%	
3 Office supplies in 10 states		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	40	10	1%	
4 Office utilities & communication in 10 states		10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	100	25	2%	
2 Construction of infrastructure and procurement of equipment	258																										258	65	5%	
1 Construction of office buildings																														
2 Construction of research, training and other specialized buildings																														
3 Construction of feeder roads																														
4 Construction of production, market and transportation facilities																														
5 Acquisition of land																														
6 Procurement of vehicles																														
7 Procurement of equipment	258																										258	65	5%	
1 ICT equipment (laptops) in head office at Juba		72																									72	18	1%	
2 ICT equipment (printers) in head office at Juba		6																									6	2	0%	
3 ICT equipment (copier) in head office at Juba		20																									20	5	0%	
4 ICT equipment (laptops) in state office		80																									80	20	1%	
5 ICT equipment (copier) in state office		80																									80	20	1%	
3 Subsidies, e equity and loans	200		45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	556	139	10%	

02.01 Grazing allotments and land-tenure project (cont.)

SSP/USD = 4

Project duration	Phase 1												Phase 2				Phase 3				Phase 4				Total						
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000	USD '000				
1 Provision of cash and/or in-kind subsidies																															
2 Provision of training services to the private sector																															
1 Workshop in state (per diem for local stakeholders)																															
2 Workshop in state (transportation for local stakeholders)																															
3 Review & enforcement seminar at state																															
4 Review & enforcement seminar at county																															
3 Equity investments																															
4 Provision of loans																															
5 Social assistance/donation (Emergency)																															
Total (SSP '000)	1,633	2,288	422	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	5,533	100%	
Total (USD '000)	408	572	105	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	1,383	100%	
% to total	30%	41%	8%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%			

Public sector project
Routine work by government
Private sector project
Routine work by private sector

3.4.2 Livestock census, disease surveillance, and information management project

Items	Information
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Part 1: Project profile administration

1.1 Project identification:

(1) Subsector:	Livestock		
(2) Project name:	Livestock census, disease surveillance and information management project		
(3) Project ID:	0 2 0 2 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2015/16	Ending FY: 2016/17	Duration (years): 2
(5) Total investment:	SSP 6,673,000	USD 1,668,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		LS.SA2	Public sector institution and management capacity development	Table 2-3
(2) Government organisation:	01	MLFI-PL	Directorate of Planning	Table 2-6
		MLFI-AII	All other MLFI Directorates	Table 2-6
(3) Activity types:	104	ID-IM	Institutional development- Implementation and monitoring	Table 2-12
	201	SP-IM	Service delivery and infrastructure development- Information management and analysis	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	X
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	X
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income		

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>The exact number of livestock and poultry within South Sudan is unknown. Several estimates have been provided and there is limited agreement between the sources. The United Nations Food and Agriculture Organization (FAO) estimates are the best source and that information is severely limited in accuracy. The latest census failed to include all the country and only focused on a few areas. Currently the Ministry of Livestock and Fisheries Industry (MLFI) has control of the purchase and distribution of vaccines for economically important diseases as outlined by the World Organisation for Animal Health (OIE). To properly plan and ensure that all animals are vaccinated within South Sudan an accurate number of livestock and poultry is needed. There is unreliable information concerning the number of livestock diseases and their prevalence in South Sudan. Surveys of the types of diseases and location of disease outbreak are essential in maintaining a healthy livestock population. Along with the general livestock census ongoing surveillance of diseases prevalent in the country is needed. This surveillance data needs to be maintained in a secure database and updated constantly to monitor disease outbreaks and control measures taken.</p>
(2) Objectives:	<p>Develop a reliable database (baseline) with quantifiable and verifiable livestock numbers and country-wide disease information.</p>
(3) Overall description including temporal and spatial extent of project:	<p>A rapid census of the livestock and poultry industry as well as livestock diseases and their location within South Sudan will be undertaken to quantify the number of each species and diseases. This will allow for a better economic understanding of the industry and develop a baseline for monitoring while allowing officials a more accurate means of calculating the potential economic benefit to South Sudan.</p>
(4) Component structure:	<p>Component 1: Develop a reliable, quantifiable, and secure database of livestock and poultry numbers for use by all stakeholders. Component 2: Develop a reliable, quantifiable, and secure database of livestock and poultry diseases with affected regions for use by all stakeholders.</p>
2.2 Detailed description of project component, activity and outputs	
(1) Component, activity and outputs:	<p>Component 1: Develop a reliable, quantifiable, and secure database of livestock and poultry numbers for use by all stakeholders. Activity 1.1: Develop and test survey form for use to quantify livestock/poultry numbers and disease information. Activity 1.2: Identify and train surveyors how to use and complete the form. One potential source are the community animal health workers Activity 1.3: Community meetings with Paramount Chiefs, Chiefs, Sub-chiefs and elders explain program and obtain cultural permission. Activity 1.4: Implement the project to collect field information. Activity 1.5: Enter the data into a searchable, reliable and secure data base. Activity 1.6: Share data with all stakeholders. Outputs: A searchable, reliable and secure data base that contains the number of livestock and poultry in the country as well as disease outbreak information (specific to regions). Component 2: Develop a reliable, quantifiable, and secure database of livestock and poultry diseases with affected regions for use by all stakeholders. Activity 2.1: Design and test a survey instrument for collection of livestock and poultry numbers and disease information. Activity 2.2: Train field staff of Community Animal Health Workers (CAHW) on how to use instrument Activity 2.3: Community meetings recorded and permission granted Activity 2.4: Field implementation (Surveys collected) Activity 2.5: Enter information into database Activity 2.6: Share information Outputs: A searchable, reliable and secure data base that contains the number of livestock and poultry in the country as well as disease outbreak information (specific to regions).</p>
2.3 Service providers and beneficiaries	
(1) Description of service providers within the framework of the project:	<p>Services to design survey instrument. Services to complete the survey in the field. Services to enter information into database. Services to design and maintain database.</p>
(2) Description of beneficiaries within the framework of the project:	<ul style="list-style-type: none"> All stakeholders and other entities needing reliable data concerning livestock and poultry numbers and disease information.
2.4 Outcomes, impact and contributions to value added (i.e. economic growth)	
(1) Outcomes and impact:	<p>Reliable secure database of livestock and poultry numbers and diseases that can be used</p>

Items	Information		
(2) EIRR and/or FIRR, and/or other economic analysis:	in basic economic calculations and predictions. (if applicable)		
2.5 Environmental and social impact, and mitigation measures			
(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: a Positive: d</td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: a Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: a Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • There will be a minimal impact on the environment because activity only involves information gathering and entry into a computer database. <p>(Positive)</p> <ul style="list-style-type: none"> • A livestock census is mandatory for South Sudan to progress in the livestock industry. The number of livestock needs to be known so that they can be monitored for disease surveillance and rangeland monitoring and improvement. This project will greatly benefit the entire livestock industry. 		
2.6 Monitoring and evaluation for impact measurement			
(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • Number of actual livestock and livestock disease prevalence unknown. 		
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • Survey forms completed. • Data transferred from survey form into a reliable and secure database. 		
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> • Number of survey forms completed and entered into database. 		
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> • Directorate of Planning; All other Directorates within MLFI 		
2.7 Required human resources			
(1) Principle of human resources management:	Varies with level of participation. Government individuals need to be present on workdays with the ability to understand simple instructions.		
(2) Required human resources in the public sector (Positions, grades and numbers):	<p>For the national livestock census:</p> <ul style="list-style-type: none"> • 10 (1 per state)- Census manager. • 500 (50 per state)- low-grade staff to administer census survey. • 50- mid-grade staff to enter data • 5- mid-grade staff to maintain database <p>For the national disease surveillance survey:</p> <ul style="list-style-type: none"> • 10 (1 per state)- Census manager (could be same managers for census). • 500 (50 per state)- low-grade staff to administer census survey (could be same staff used for census). • 50- mid-grade staff to enter data (could be same staff used for census). • 5- mid-grade staff to maintain database (these could be on-going staff that maintain both the census and disease surveillance databases). 		
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<ul style="list-style-type: none"> • 1- Consultant to design and test survey instrument. This consultant can train surveyors on how to administer and complete the instrument. • 1- Consultant to assist and train in the development of a reliable and secure database. This consultant can train local staff on data entry and maintenance. 		
2.8 Risk assessment with respect to project objectives and resources to be applied			
(1) Expected level of risk:	H L: Low M: Medium H: High (select an indicator from the list)		
(2) Explanation of expected risks:	The overall risk of the project is low since it a data collection activity. It is critical that communities be informed through Paramount Chiefs, Chiefs, sub-chiefs and elders to ensure cooperation.		
2.9 Other special considerations and/or notes			
(1) Other special considerations and/or notes:	Access to updated computer and software is required.		
2.10 Routine operation and required resources after the completion of the project			
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>Human resources (on-going):</p> <ul style="list-style-type: none"> • 10(1 per state) - Senior-grade managers in charge of disease surveillance (annual report published) and census (done every 10 years). • 5 Mid-grade staff to update and maintain the national census and disease surveillance data-base. <p>Other costs(on-going):</p> <ul style="list-style-type: none"> • Computer costs • Communication allowances (cell phones and internet). • Office supplies and maintenance. • Transportation allowances (for managers to travel throughout states collecting data). 		

3.4.3 National and State livestock policy and legal framework establishment and maintenance project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Livestock		
(2) Project name:	National and State livestock policy and legal framework establishment and maintenance project		
(3) Project ID:	0 2 0 3 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2015/16	Ending FY: 2022/23	Duration (years): 8
(5) Total investment:	SSP 9,740,000	USD 2,435,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		LS.SA1	Policy and legal framework development	Table 2-3
(2) Government organisation:	01	MLFI-PL	Directorate of Planning	Table 2-6
		MLFI	All other Directorates under MLFI	Table 2-6
(3) Activity types:	101	ID-LI	Institutional development- Legal and institutional development	Table 2-12
	103	ID-PP	Institutional development- Policy formulation and planning	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	X
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	X
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	X
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	X
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	X
	03	SP	State project	X
	04	SC	State-County project	X
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	The project is to review the current sector and subsector policy, develop and/or amend policy to align with strategic goals, enhance law and regulations governing the industry, develop food safety guidelines, develop grades and standard guidelines, develop a protocol of safety review, harmonize state and national laws, harmonize state (local) and national implementation protocols, address communications channels, and develop a regulatory body that enforces laws and regulation of the country.
(2) Objectives:	To review and revise current livestock, poultry, range and wildlife laws and regulations and develop a national and local industry and sector policy for South Sudan.
(3) Overall description including temporal and spatial extent of project:	<p>Currently policies (four broad policy context, eleven technical policies and thirteen draft bills) for the livestock and poultry sector reside in the Natural Resources Sector. Coordination for change is with the Natural Resources Sector working group. Currently, there is no single document that collates and harmonizes the various policies into a single consolidated reference. Thus, there is a need to ensure compliance with the constitution of South Sudan which sets the legal framework and mandate for the development of livestock and poultry resources. It would include review of the following:</p> <ul style="list-style-type: none"> • livestock subsector policy, • legal and regulatory frameworks and enforcement mechanisms (including clauses on inclusivity in formulation and implementation of development plans and programs) • regional equity in development • expediting rural development as a strategy • affirmative action to address imbalances created by history, customs and traditions • freedom of children from exploitation and the right to education • principles of devolution and decentralization • recognition and integration of traditional authorities and systems • regulation integration and cooperation • human rights • communal land tenure and protection of seasonal access rights, • land acquisition for investment • interstate and regional trade and commerce • policy harmonization with surrounding countries • livestock movement and identification • import/export and border crossing regulations • food safety regulations • tax regulation • trade tariffs • import and export duties • quarantine fees, animal health laws and regulations • processes for permitting livestock movement • establishment of grazing rights on public lands • aligning state policies with national policies, and any additional laws and policies needed for a progressive livestock industry.
(4) Component structure:	<p>Component 1: Review all national and state policies Component 2: Develop comprehensive sector policy Component 3: Harmonize policy with OIE and surrounding countries Component 4: Harmonize national policy with states and local stakeholders Component 5: Develop a regulatory and enforcement branch of government Component 6: Develop food safety and grades and standards regulations Component 7: Develop a policy review process with recognized information channels</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1: Policy review Activity 1.1: Natural Resource sector policy review Activity 1.2: Livestock sector review Activity 1.3: State livestock policy review Outputs: A comprehensive policy document.</p> <p>Component 2: Develop comprehensive livestock, poultry, wildlife policy. Activity 2.1: Natural Resources sector Activity 2.2: Livestock sector Activity 2.3: Rangeland or pastoral sector. Outputs: Policies are produced in a transparent, inclusive process.</p> <p>Component 3: Harmonization with the World Organisation for Animal Health (OIE) and surrounding countries. Activity 3.1: Work with OIE to ensure harmonization of national policy with international policy</p>
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Items	Information
	<p>Activity 3.2: Work with Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN) to harmonize regional policy with surrounding countries. Outputs: Policy is harmonized with OIE and surrounding countries.</p> <p>Component 4: Harmonization between national and state policies. Activity 4.1: Harmonize national and state policy. Activity 4.2: Harmonize national, state and local (tribal) policy. Outputs: National and state policies and responsibilities are harmonized.</p> <p>Component 5: Develop a regulatory branch that ensures the compliance and enforces laws. Activity 5.1: Develop and harmonize a national and state agency that ensures enforcement of policies. Activity 5.2: Develop a protocol of penalties when individuals, companies and other groups fail to follow policy, including imprisonment and fines. Outputs: A national and state recognized regulatory and enforcement agency produced.</p> <p>Component 6: Develop food safety, grades and standards regulation. Activity 6.1: Develop policy. Activity 6.2: Harmonize policy with state and local governments. Activity 6.3: Develop oversight process that reviews and certifies premises. Outputs: A national food safety, grades and standards policy for livestock.</p> <p>Component 7: Standardize review mechanisms and information channels. Activity 7.1: Outline review process and share with all stakeholders Activity 7.2: Establish a regulatory body that reviews premises and enforces laws and regulations Outputs: A published and understood policy review process with transparent information channels available to all stakeholders.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	The service providers will be primarily international policy experts in livestock and natural resources.
(2) Description of beneficiaries within the framework of the project:	Producers and consumers of South Sudan. Policies will be harmonized for all producers to ensure protection and advancement of the industry. The harmonized policy will ensure safe protein supplies for all consumers.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	Standardized, internationally accredited livestock policy and regulations with a transparent enforcement system and a transparent system for input and change.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td> Negative: a Positive: d </td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: a Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: a Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> No negative environment or social impact will take place for this project. <p>(Positive)</p> <ul style="list-style-type: none"> Standardization of livestock and pastoral policies will have a positive and significant impact on the environment because the policies will be developed to ensure that the environment is protected and safe guards are entered to promote safety. Likewise the policies allow for addressing disease concerns and allows harmonization with international and regional policies. It ensures food safety and allows for a "safer" protein for human consumption. The adoption of standardized livestock policy will lead to improved health and food conditions of the population. 		

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> Lack of focused and harmonized international accepted policy document.
(2) Measurable indicators and situation at the end point:	A harmonized internationally accepted policy document focused on the livestock sector addressing, regulation, enforcement, policy change and communication channels.
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> Recorded and shared policy document.
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> Directorate of Planning; all other MLFI Directorates

Items	Information					
2.7 Required human resources						
(1) Principle of human resources management:	Senior staff need the ability to write function policy and regulations for the industry. They need to have a general understanding of the industry, in addition to training in policy and regulation development, for example, political sciences and law backgrounds. They need to communicate with industry experts and work with International staff and agencies to write policy. They need support staff that maintains records and assists in routine activities. The regulation division need to have a background in monitoring and enforcement.					
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> • 5- Senior grade administrators • 15- Senior grade policy developers – Large ruminants, small ruminants, dairy, water, food safety, range or pastoral management, business enabling environment, taxation, importation – exportation, water, feed, environment, judicial, animal health • 30- Mid-grade administrative staff 					
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	International policy experts in veterinary and livestock affairs, business, environment, and taxation who will work with: <ul style="list-style-type: none"> • World Organization for Animal Health (OIE) • Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN) 					
2.8 Risk assessment with respect to project objectives and resources to be applied						
(1) Expected level of risk:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; text-align: center;">H</td> <td style="width: 25%; text-align: center;">L: Low</td> <td style="width: 25%; text-align: center;">M: Medium</td> <td style="width: 25%; text-align: center;">H: High</td> <td style="text-align: right;">(select an indicator from the list)</td> </tr> </table>	H	L: Low	M: Medium	H: High	(select an indicator from the list)
H	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	Given the current situation with minimal focus on the subsector, this project could be delayed or not given resources to accomplish given tasks. It has the potential to have a significant impact on the industry but has many places in which approaches and regulations as well as enforcement can be negatively influenced.					
2.9 Other special considerations and/or notes						
(1) Other special considerations and/or notes:	Transparency and high ethics are required for all individuals working in this sector.					
2.10 Routine operation and required resources after the completion of the project						
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	Human resources (on-going): <ul style="list-style-type: none"> • 5- Senior grade administrators • 15- Senior grade policy developers – Large ruminants, small ruminants, dairy, water, food safety, range or pastoral management, business enabling environment, taxation, importation – exportation, water, feed, environment, judicial, animal health • 30- Mid-grade administrative staff Other on-going routine costs: <ul style="list-style-type: none"> • Cost of computers • Office supplies • Communication allowances (cell phones and internet) Record keeping costs					

Part 3: Project cost estimation

Project duration	Cost group	SSP/USD = 4												Total														
		Phase 1			Phase 2			Phase 3			Phase 4				% to total													
		15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27			27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40
1 Management and operation of project																										9,042	2,261	93%
1 Deployment of government staff																										246	61	3%
1 Survey to state (per diem)																										24	6	0%
2 Survey to state (transportation)																										27	7	0%
3 Workshop in state (per diem for central office staff)																										81	20	1%
4 Workshop in state (transportation for central office staff)																										90	23	1%
5 Review & information seminar at state(per diem for staff)																										5	1	0%
6 Review & information seminar at state(transportation)																										18	5	0%
2 Procurement of administrative services (contracted)																										900	225	9%
1 Publish documents																										900	225	9%
3 Procurement of professional services (contracted)																										7,776	1,944	80%
1 Long term policy expert (team leader)																										4,536	1,134	47%
2 Short term policy expert (natural resources)																										1,620	405	17%
3 Short term policy expert (livestock)																										1,620	405	17%
4 Implementation of staff training																										79	20	1%
1 Inter-ministry stakeholder meeting																										4	1	0%
2 Harmonization meeting at Juba (venue)																										9	2	0%
3 Harmonization meeting at Juba (per diem, etc.)																										3	1	0%
4 Harmonization meeting at Juba (transportation)																										48	12	0%
5 Workshop in state (per diem for state officials)																										10	3	0%
6 Review & information seminar at state(venue)																										5	1	0%
5 Implementation of research, studies and surveys																										42	11	0%
6 Delivery of extension and training services to the private sector																										12	3	0%
7 Operation and maintenance																										30	8	0%
1 Office supplies in Juba																												
2 Office utilities & communication in Juba																												
2 Construction of infrastructure and procurement of equipment																										98	25	1%
1 Construction of office buildings																												
2 Construction of research, training and other specialized buildings																												
3 Construction of feeder roads																												
4 Construction of production, market and transportation facilities																												
5 Acquisition of land																												
6 Procurement of vehicles																												
7 Procurement of equipment																												
1 ICT equipment in head office at Juba																										98	25	1%
2 ICT equipment in head office at Juba																										72	18	1%
3 ICT equipment in head office at Juba																										6	2	0%
3 Subsidies, equity and loans																										20	5	0%
1 Provision of cash and/or in-kind subsidies																										600	150	6%
2 Provision of training services to the private sector																										600	150	6%
1 Workshop in state (per diem for local stakeholders)																										200	50	2%
2 Workshop in state (transportation for local stakeholders)																										200	50	2%
3 Review seminar in state (per diem for local stakeholders)																										100	25	1%
4 Review seminar in state (transportation for local stakeholders)																										100	25	1%

02.03 National and State livestock policy and legal framework establishment and maintenance project (cont.)

SSP/USD = 4

Project duration	Phase 1		Phase 2		Phase 3		Phase 4		Total																			
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000	% to total	
3 Equity investments																												
4 Provision of loans																												
5 Social assistance/donation (Emergency)																												
Total (SSP '000)	2,757	3,378	3,376	46	46	46	46	44																		9,740	100%	
Total (USD '000)	689	845	844	12	12	12	12	11																		2,435	100%	
% to total	28%	35%	35%	0%	0%	0%	0%	0%																				

Public sector project
Routine work by government
Private sector project
Routine work by private sector

3.4.4 Creation of animal diagnostic laboratories, early disease response, and quarantine system project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Livestock		
(2) Project name:	Creation of animal diagnostic laboratories, early disease response and quarantine system project		
(3) Project ID:	0 2 . 0 4 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2020/21	Ending FY: 2029/30	Duration (years): 10
(5) Total investment:	SSP 43,937,000	USD 10,984,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		LS.SA2	Public sector institution and management capacity development	Table 2-3
(2) Government organisation:	07	MLFI-VS	Directorate of Veterinary Services	Table 2-6
	09	MLFI-RD	Directorate of Animal and Fisheries Research and Development	Table 2-6
(3) Activity types:	210	SP-SI	Service delivery and infrastructure development- Social infrastructure development	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	X
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	52	NGL	NGO loans and equity financing	
	51	NGG	NGO grant	
61	FGI	Financed by generated income		

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:	<p>Veterinary diagnostic laboratories are needed to diagnose and treat animal diseases and meet sanitary and health standards for both domestic and export markets. A herd of livestock could die in a rural area and a local veterinarian may not be able to diagnose the disease. Tissue samples from the infected livestock would be brought to the diagnostic laboratory for confirmation of diagnosis. A diagnostic laboratory is the only true method for diagnosing animal diseases. Once a diagnosis has been made a national early disease response system needs to be in place to quickly isolate, quarantine, and begin treatment of the disease. For example if an area of South Sudan has an outbreak of foot and mouth disease, a tissue sample would be brought to the diagnostic laboratory for confirmation of the specific strain of hoof and mouth disease. Then the area would be isolated and any surrounding livestock quarantined and then treated with the vaccination specific to the strain of the disease that was diagnosed. This would prevent the disease from spreading. Laboratory capacity is a critical point in both national and regional control for monitoring diseases including early detection and confirmation. South Sudan has several major diseases of national economic importance that should be monitored and controlled. Timely and proper diagnosis is required. To qualify for certain international markets a disease free zone has to be established. Without a method to diagnosis and track diseases this certification will be challenging, if not impossible.</p> <p>Quarantine facilities need to be established at border points to minimize contagious disease transfer between regions. Any live animals being imported into South Sudan have to be quarantined so they can be monitored to determine if they are infected with any diseases. Comprehensive import regulations along with well-maintained quarantine facilities at border crossings is an essential first step in keeping South Sudan free of infectious livestock diseases. Linkages with the fisheries and crop subsectors can be made utilizing the same buildings on border checkpoints for quarantine. Inside the building there would be separate rooms with independent entrances for crops, fisheries, and livestock.</p>
(2) Objectives:	<ul style="list-style-type: none"> • To develop the resources necessary to monitor and diagnose zoonosis and economic diseases for livestock, poultry, and fisheries in South Sudan while developing the capacity at international border crossings to control livestock movement to ensure that only disease free animals travel into and out of the country. • A functional veterinarian diagnostic system at national and state levels, certified border crossings with associated quarantine facilities, and a formulated early response plan for disease outbreaks in livestock, poultry, and fisheries.
(3) Overall description including temporal and spatial extent of project:	<p>The project will undertake a comprehensive review of the current structures and needs for diagnostic laboratories. Based on the findings appropriate structures will be designed, constructed and equipment installed. Staff will receive training on how to operate the equipment as well as general laboratory management. For proper animal movement into South Sudan from surrounding countries a proper quarantine and border crossing structure must be in place. Each border access point will be reviewed and a proper structure will be designed and constructed. Likewise the staff will receive training on proper operation and prevention of diseases. An early response system to disease outbreaks will be formulated and all veterinarians and community animal health workers will be trained on this system.</p> <p>A component will use disease-specific regional strategies and strengthen the quality of Veterinary Services and collaboration between countries using the results from the World Organisation for Animal Health (OIE) evaluation of the performance of the Veterinary Services (PVS) pathway.</p>
(4) Component structure:	<p>Component 1: Assessment Component 2: Construction Component 3: Training</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1: Prepare a comprehensive assessment for South Sudan</p> <p>Activity 1.1: Develop a complete review of current diagnostic facilities in South Sudan or determine if they even exist.</p> <p>Activity 1.2: Using OIE criteria, and international and regional guidelines determine the actual number of diagnostic facilities needed for the country.</p> <p>Activity 1.3: Using OIE criteria, and international and regional guidelines review the livestock border crossings.</p> <p>Activity 1.4 Prepare a document with the recommended facilities and specific locations including equipment requirements for each location.</p> <p>Outputs: A complete review of current diagnostic facilities and active border crossings in South Sudan. A formulated early emergency response plan to disease outbreaks</p>
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Items	Information
	<p>within the country.</p> <p>Component 2: Construction phase Activity 2.1 Preparation of bidding document including all environmental specifications and laboratory equipment. Activity 2.2: Secure funding, land and permissions. Activity 2.3: Using transparent and good business practices, determine a contractor for construction of laboratory as well as border crossing quarantine facilities. Award separate contracts (one for construction of the facilities and a second for the purchase of the laboratory equipment). Outputs: 10 state and 1 central diagnostic laboratory constructed and maintained. Border crossing locations identified (25) and quarantine facilities constructed. Laboratory equipment purchased for the 11 laboratories and equipment purchased for border crossing quarantine facilities.</p> <p>Component 3: Training Phase Activity 3.1: All staff both senior and junior staff will receive International training on proper use and maintenance of the equipment and methods. Outputs: All staff both senior and junior staff (115 total) will receive International training on proper use and maintenance of the diagnostic laboratory equipment and methods. This training will need to take place for 5 days per week for 8 weeks. Activity 3.2: Regionalized training of staff for quarantine and border crossing facilities. Activity 3.3: Facility Management training with emphasis on ethics, importance in disease control, outbreaks, emergency response and compliance with international protocol. Outputs for 3.2 and 3.3: Border facility management training with emphasis on ethics, importance in disease control, outbreaks, emergency response and compliance with international protocol. 100 of the technical staff will be trained for a period of 30 days. 125 of the maintenance staff will be trained for a period of 14 days.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	The key service providers are international specialists in disease control and facility design. Officials from OIE, FANRPAN, and regional programs are potential providers. Qualified construction companies will be needed for the building phase. A strong program management unit is needed for budget control and day to day deliverables.
(2) Description of beneficiaries within the framework of the project:	Veterinary Services will greatly benefit at all levels. Livestock producers will benefit from better disease control within the country.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	A functional disease and food safety diagnostic system with controlled border crossings and areas for quarantine. The impact will improve the disease status of South Sudan and allow for monitoring food quality.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: b Positive: d</td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: b Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: b Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • Construction of buildings could have an impact on the environment. <p>(Positive)</p> <ul style="list-style-type: none"> • If this project is properly implemented the impact on the environment and society is very positive. Livestock producers will save tens of thousands of dollars by having disease outbreaks quickly eradicated and by having infected livestock being imported quarantined at border check points. The project will have a significant positive impact on both the environment and society. The program will directly address disease monitoring. 		

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • Inadequate operating national and regional diagnostic laboratories • Inadequate operating certified border crossings • Inadequate operating certified quarantine facilities
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • 1 national and 10 state diagnostic laboratories • Number of certified border crossings (25) • Number of certified quarantine facilities (25)
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> • Facilities constructed. Monitoring reports. Photographs.

Items	Information
(4) Responsible parties for the monitoring and evaluation:	• Directorate of Veterinary Services; Directorate of Animal and Fisheries Research and Development

2.7 Required human resources

(1) Principle of human resources management:	• Capacity building at all levels from Ministry to field staff.
(2) Required human resources in the public sector (Positions, grades and numbers):	<p>Central Diagnostic laboratory</p> <ul style="list-style-type: none"> • 1- Senior laboratory manager • 5- Senior level laboratory technicians • 16- Mid-level laboratory technicians • 3- Mid-level administrative staff <p>State Diagnostic laboratories (10 laboratories)</p> <ul style="list-style-type: none"> • 10- Senior laboratory manager (1 for each lab) • 60- Mid level laboratory technicians (6 for each lab) • 20- Mid-level administrative staff (2 for each lab) <p>Border/Quarantine facility maintenance staff (25 border crossings)</p> <ul style="list-style-type: none"> • 25- Senior level facility manager • 25- Senior level veterinarian • 25- Junior level veterinarian • 25- Mid-level administrative assistant • 125- Skilled maintenance staff
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Animal disease control specialists.</p> <p>Facility design specialists and reputable construction companies.</p> <ul style="list-style-type: none"> • 1 international veterinary diagnostic consultant. 1 year assignment.

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	H L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	The overall risk assessment is considered high due to the complexity of the project. Diagnostic laboratories deal with biological entities which at any level is very risky. The project is introducing border crossing requirements which have not been in place for several years. It will require construction that requires permission and land acquisitions. Additionally it requires coordination at the international, regional, national, state and local levels.

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes	There are resources with OIE, FANRPAN, Regional World Bank Programs and others that are available for South Sudan in the planning stages.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>Central Diagnostic laboratory</p> <ul style="list-style-type: none"> • 1- Senior laboratory manager • 5- Senior level laboratory technicians • 16- Mid-level laboratory technicians • 3- Mid-level administrative staff <p>State Diagnostic laboratories (10 laboratories)</p> <ul style="list-style-type: none"> • 10- Senior laboratory manager (1 for each lab) • 60- Mid level laboratory technicians (6 for each lab) • 20- Mid-level administrative staff (2 for each lab) <p>Border/Quarantine facility maintenance staff (25 border crossings)</p> <ul style="list-style-type: none"> • 25- Senior level facility manager • 25- Senior level veterinarian • 25- Junior level veterinarian • 25- Mid-level administrative assistant 125- Skilled maintenance staff
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02.04 Creation of animal diagnostic laboratories, early disease response, and quarantine system project (cont.)

SSP/USD = 4

Project duration	Phase 1												Phase 2				Phase 3				Phase 4				Total					
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000	USD '000	% to total		
4 Laboratory equipment (middle, for state laboratory)						400	400																				800	200	2%	
5 Laboratory equipment (small, for state laboratory)						400	400																					800	200	2%
6 Equipment for quarantine facility						800	800																					1,600	400	4%
3 Subsidies, equity and loans																														
1 Provision of cash and/or in-kind subsidies																														
2 Provision of training services to the private sector																														
3 Equity investments																														
4 Provision of loans																														
5 Social assistance/donation (Emergency)																														
Total (SSP '000)						2,755	16,778	14,198	3,404	1,367	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087	43,937	10,984	100%		
Total (USD '000)						689	4,194	3,550	851	342	272	272	272	272	272	272	272	272	272	272	272	272	272	272	272	272	10,984	10,984	100%	
% to total						6%	38%	32%	8%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	100%	100%	100%		

Public sector project
Routine work by government

Private sector project
Routine work by private sector

3.4.5 Development of a central and regional veterinary drug stores project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Livestock		
(2) Project name:	Development of a central and regional veterinary drug stores project		
(3) Project ID:	0 2 0 5 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2020/21	Ending FY: 2029/30	Duration (years): 10
(5) Total investment:	SSP 6,926,000	USD 1,731,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		LS.SA5	Animal health and disease control services	Table 2-3
(2) Government organisation:	07	MLFI-VS	Directorate of Veterinary Services	Table 2-6
	05	MLFI-EX	Directorate of Livestock and Fisheries Extension	Table 2-6
(3) Activity types:	104	ID-IM	Institutional development- Implementation and monitoring	Table 2-12
	203	SP-EX	Service delivery and infrastructure development- Extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	X
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	X
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	X
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>Veterinary supply outlets do exist in South Sudan but on a limited scale. Outlets are found mainly in state capitals and county headquarters. There is no national drug store in South Sudan and no central licensing system for private sector supply outlets. Supply outlets will be referred to as veterinary stores or simply 'stores' for the rest of this project profile. The main clients of these stores are pastoralists, CAHWs and NGOs.</p> <p>According to the CAMP Situation Analysis Report (December, 2013), the main constraints cited by veterinary store owners across the country include: poor road infrastructure making access to the interior very difficult; unreliable supply sources; high cost of transport; huge seasonal fluctuations in sales; low purchasing power even for those with many animals; and insecurity across many parts of the country.</p> <p>Agro-inputs such as animal feed and equipment, day old chicks, and dealers specialising in providing animal production inputs and equipment, are almost non-existent across South Sudan. There is very low utilisation of inputs among the majority of livestock keepers. Commercial enterprises or those supported by NGOs import feed, equipment and other inputs directly from Uganda, Sudan, and Kenya increasing unit costs. The current sources for drugs coming into the country are from the neighbouring countries of Uganda, Kenya, Ethiopia and Sudan. This is limited due to the cost of transportation, high taxation, and poor road infrastructure. The drug vendors have to charge high prices to livestock producers to recoup these expenses. Furthermore, the drugs sold by vendors usually do not have proper storage (are kept in the hot sun instead of refrigeration), are expired, or come from disreputable companies.</p> <p>The companies currently licensed to import drugs into the country are working in isolation from the government. As a result there are no standards set for drug quality, storage, dispensing guide, and appropriate dosage according to the pharmaceutical recommendation.</p>
(2) Objectives:	<p>To establish a central veterinary drug store that oversees the importation and licensing of quality drugs for the private sector veterinary stores in South Sudan.</p> <p>A system of established private sector veterinary stores that provide not only drugs but all aspects of agro-inputs for the livestock industry such as feed supplements, equipment, and day old chicks.</p>
(3) Overall description including temporal and spatial extent of project:	<p>Establishment of a central veterinary drug store that is owned and operated by the Directorate of Veterinary Services will ensure oversight of all drugs coming into South Sudan, and that private veterinary stores are licensed to sell these drugs. Licenses will be given to private veterinary stores after a specified set of standards have been met. For example, the store is owned or has in their employment a certified and licensed veterinarian; they have functioning cold storage for drugs, etc. A central drug store will also ensure that drugs that are imported are not expired, are stored in refrigerated or cool conditions, and are from reputable pharmaceutical companies. It is important that the government of South Sudan create tax breaks for private sector veterinary stores so they can sell livestock drugs and other equipment at a price that livestock producers can afford. If producers cannot afford the drugs then their herds go unvaccinated which causes national disease outbreaks and huge losses to the livestock industry.</p> <p>There will be a need to establish a functional cold chain system for vaccination storage and distribution from the central drug store to states, counties, and remote rural areas. Access to veterinary drugs by livestock keepers will be a major benefit for the livestock industry.</p> <p>Other agro-inputs for the livestock industry would be sold through private sector veterinary stores and tax breaks should be provided for these inputs also. For example in the United States there are many farm stores that sell veterinary drugs, animal health supplies (syringes, needles, etc.), feed supplements, animal and poultry feed, equipment (fencing, panels, shelters), and day old chicks (with accompanying supplies such as heat lamps, chick starter feed, and feed and watering equipment for baby chicks). This type of farm store is what is envisioned for the private sector in South Sudan to create a functioning and sustainable livestock industry in the long term.</p>
(4) Component structure:	<p>Component 1: Establishment of a national central veterinary drug store. Component 2: Development of policies and standards for private veterinary stores. Component 3: Develop regulatory and inspection policies for private sector veterinary drug stores. Component 4: Technical assistance for private sector veterinary drug stores</p>

Items	Information
<p>2.2 Detailed description of project component, activity and outputs (1) Component, activity and outputs:</p>	<p>Component 1: Establishment of a national central veterinary drug store.</p> <p>Activity 1.1: Conduct an assessment of the best location in Juba to construct a national central veterinary drug store.</p> <p>Activity 1.2: Once a location has been chosen, a transparent bid process will be implemented with separate bids being awarded for construction of the facility and for the procurement of equipment.</p> <p>Activity 1.3: Once the facility has been constructed and equipped it will be stocked with high quality veterinary drugs that will be sold to private sector veterinary stores.</p> <p>Outputs: Fully functioning national central veterinary drug store. An assessment team that will assess the location, oversee the bidding process, oversee the construction of the facility, oversee the procurement of equipment, and assist with procurement of veterinary drugs to stock the new central drug store will consist of the following individuals:</p> <ul style="list-style-type: none"> 1 international veterinarian consultant with experience in pharmaceuticals and drug store operations. 1 Director General of the Directorate of Veterinary Services 2 senior level veterinary officers from the Directorate of Veterinary Services (DVS) 2 junior level veterinary officers from the (DVS) <p>It is estimated a facility of 140 square meters will be needed with large refrigeration rooms, generators to ensure refrigeration is continued when there are power outages, and appropriate office space. An estimated cost for constructing and equipping the facility is \$80,000 USD. Purchasing veterinary drugs to stock the central drug store would cost approximately \$100,000 USD. It is estimated that construction and stocking of the central drug store would take 1 year. The central drug store would import the drugs tax free and then charge very minimal mark up costs when selling to private sector veterinary stores. One incentive, to encourage private stores not to by-pass the central government store, would be that private stores not purchasing from the central store would pay full taxes.</p> <p>Component 2: Development of policies and standards for private veterinary stores.</p> <p>Activity 2.1: Policies and standards would be developed for private veterinary stores including standards for licensing (including annual license fees), routine inspections from the DVS, policy for purchasing drugs, written standards for safely storing, selling, dispensing drugs, and development of cold chain strategies. This team would also provide a draft of proposed tax breaks for private veterinary stores that the government would then vote on and hopefully approve.</p> <p>Outputs: Policy and standards developed by a team consisting of the following individuals:</p> <ul style="list-style-type: none"> 1 international veterinarian consultant with experience in pharmaceuticals and drug store operations. 1 Director General of the Directorate of Veterinary Services 2 senior level veterinary officers from the Directorate of Veterinary Services (DVS) 2 junior level veterinary officers from the (DVS) <p>This component and activity would take 3 months to complete.</p> <p>Component 3: Develop regulatory and inspection policies for private sector veterinary drug stores.</p> <p>Activity 3.1: Policies would be developed specifying regulatory standards and inspection standards for private veterinary stores.</p> <p>Outputs: Private veterinary stores are regulated and inspected. The same team listed under Component 2 would implement this activity.</p> <p>This component and activity would take 3 months to complete and would then be provided to the appropriate government officials in order for the policies to become law. Once the policies become law routine inspections would need to take place at each private sector veterinary store. 10 state veterinary officers (1 per state) would be assigned to complete these inspections and if necessary issue fines and penalties for non-compliance.</p> <p>Component 4: Technical assistance for private sector veterinary drug stores.</p> <p>Activity 4.1: A team of international and national specialists will provide technical assistance to private sector veterinary stores. Technical assistance would be based on the standards created by the DVS. Training subjects would include proper storage of drugs, international companies that produce quality drugs, how to dispose of expired drugs, type of animal health supplies stores would need to sell, type of agro-input supplies and equipment private stores would have the option of</p>

Items	Information
	<p>selling.</p> <p>Outputs: Trained owners of in private veterinary stores. A training team would consist of the following individuals:</p> <ul style="list-style-type: none"> 1 international veterinarian consultant with experience in pharmaceuticals and drug store operations. 2 senior level veterinary officers from the Directorate of Veterinary Services (DVS) 2 junior level veterinary officers from the (DVS) <p>5 days of training would take place in Juba and all private sector veterinary store owners would be invited to attend. It is difficult to quantify the exact number of attendees but it would be hoped that at least 150 would attend this training. The training would be free but attendees would need to cover their own transport and lodging costs.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	The establishment of a central veterinary drug store is vital for delivery of quality drugs to private veterinary stores. The drugs will be consigned according to South Sudanese specifications with special reference to livestock diseases affecting livestock in the country. Capacity building from international consultants and DVS officers will be essential for better management of the drugs and equipment.
(2) Description of beneficiaries within the framework of the project:	The primary beneficiaries would be private sector veterinary stores because they would be purchasing quality drugs with significant tax breaks. Secondary beneficiaries would be livestock producers. In addition the nation will benefit due to the acceptance of healthy animals for international trade.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	A central veterinary drug store that sells quality drugs to licensed private sector veterinary stores for the purpose of preventing national disease outbreaks. Livestock producers will have access to affordable veterinary drugs and livestock industry agro-inputs from reputable private sector veterinary stores.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1" style="width: 100%;"> <tr> <td style="width: 30%;">Negative: a</td> <td>Project:</td> </tr> <tr> <td>Positive: d</td> <td>a: is likely to have minimal or little impact on the environment and/or society</td> </tr> <tr> <td></td> <td>b: may have an impact on the environment and/or society</td> </tr> <tr> <td></td> <td>c: is likely to have a significant impact on the environment and/or society</td> </tr> <tr> <td></td> <td>d: will have a significant impact on the environment and/or society</td> </tr> </table>	Negative: a	Project:	Positive: d	a: is likely to have minimal or little impact on the environment and/or society		b: may have an impact on the environment and/or society		c: is likely to have a significant impact on the environment and/or society		d: will have a significant impact on the environment and/or society
Negative: a	Project:										
Positive: d	a: is likely to have minimal or little impact on the environment and/or society										
	b: may have an impact on the environment and/or society										
	c: is likely to have a significant impact on the environment and/or society										
	d: will have a significant impact on the environment and/or society										
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures	<p>(Negative)</p> <ul style="list-style-type: none"> • There is no negative aspect associated with this project. <p>(Positive)</p> <ul style="list-style-type: none"> • The creation of a central drug store and the distribution of affordable drugs across South Sudan will have a significant positive impact on the livestock industry by preventing disease and death and increasing the income of livestock producers. 										

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • No central veterinary drug store • No standard government policy and standards • Unknown number of private veterinary stores
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • A functioning, transparent, central veterinary drug store • Number of licensed private veterinary stores • Number of store owners attending technical training
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> • Number of operating licences approved by DVS authorities • Attendance sheets from training
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> • Directorate of Veterinary Services; Directorate of Livestock and Fisheries Extension

2.7 Required human resources

(1) Principle of human resources management:	The assessment and policy team will need to consist of experienced international and national veterinarians. Private veterinary store owners should either be licensed veterinarians or have licensed veterinarians as full time employees.
(2) Required human resources in the public sector (Positions, grades and numbers):	<p>For the central veterinary drug store (on-going):</p> <ul style="list-style-type: none"> • 1 senior level veterinarian that will serve as store manager • 1 senior level veterinarian (technical expert) • 2 junior level veterinarians • 2 mid-level administrative staff <p>For completing the assessment, policy, and training phases of this project:</p> <ul style="list-style-type: none"> • 1 Director General of the Directorate of Veterinary Services

Items	Information
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<ul style="list-style-type: none"> • 2 senior level veterinary officers from the Directorate of Veterinary Services (DVS) • 2 junior level veterinary officers from the (DVS) • 1 international veterinarian consultant with experience in pharmaceuticals and drug store operations. 18 month assignment.

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; text-align: center;">H</td> <td style="width: 20%; text-align: center;">L: Low</td> <td style="width: 20%; text-align: center;">M: Medium</td> <td style="width: 20%; text-align: center;">H: High</td> <td style="width: 30%; text-align: center;">(select an indicator from the list)</td> </tr> </table>	H	L: Low	M: Medium	H: High	(select an indicator from the list)
H	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	<p>The risk for this project is high. Having the drugs distributed from the central drug store to the private stores is risky because of lack of refrigeration and well defined cold chain methods. A solution would need to be portable coolers packed with ice that will be used to transport drugs. Another major risk would be private stores not storing the drugs properly but this can be mitigated by routine inspections from state veterinarian officers. It is recommended that private stores seek out and hire female veterinarians so that women livestock caretakers (probably the majority of livestock caretakers in South Sudan are female) feel more comfortable when receiving consultations on administering drugs to their animals.</p>					

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	<p>This will be a private sector led project with oversight being provided by the Directorate of Veterinary Services. It is essential tax breaks are given to implement the growth of these private veterinary stores.</p>
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>Human resources on-going:</p> <p>For the central veterinary drug store (on-going):</p> <ul style="list-style-type: none"> • 1 senior level veterinarian that will serve as store manager • 1 senior level veterinarian (technical expert) • 2 junior level veterinarians • 2 mid-level administrative staff • State veterinarian inspectors (on-going) • 10 junior or mid-level state veterinarian officers (1 per state) <p>Other on-going expenses:</p> <ul style="list-style-type: none"> • Drug purchasing for the central veterinary store but it is assumed that once the store starts selling to the private sector they will be self-sustaining in purchasing future drugs. • Office maintenance and supplies for central drug store • On-going utility costs and maintenance for central drug store • Computers • Communications allowances (cell phones and internet) • Transportation allowances
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Part 3: Project cost estimation

Project duration	SSP/USD = 4																										
	Phase 1			Phase 2			Phase 3			Phase 4			Total														
Cost group	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000	% to total
1 Management and operation of project																											
1 Deployment of government staff																											
2 Procurement of administrative services (contracted)																											
3 Procurement of professional services (contracted)																											
1 International consultant (veterinarian)																											
4 Implementation of staff training																											
5 Implementation of research, studies and surveys																											
6 Delivery of extension and training services to the private sector																											
7 Operation and maintenance																											
2 Construction of infrastructure and procurement of equipment																											
1 Construction of office buildings																											
2 Construction of research, training and other specialized buildings																											
1 Construction of national central veterinary store																											
3 Construction of feeder roads																											
4 Construction of production, market and transportation facilities																											
5 Acquisition of land																											
6 Procurement of vehicles																											
7 Procurement of equipment																											
1 Equipment for the national central veterinary drug store																											
2 Drugs for the national central veterinary drug store																											
3 Subsidies, equity and loans																											
1 Provision of cash and/or in-kind subsidies																											
2 Provision of training services to the private sector																											
1 Training for 150 private veterinary drug stores (per diem)																											
2 Training for 150 private veterinary drug stores (transportation)																											
3 Equity investments																											
4 Provision of loans																											
5 Social assistance/donation (Emergency)																											
Total (SSP '000)																											
Total (USD '000)																											
% to total																											
5 Revenue (Sales of drugs to cover their procurement for the following year)																											
Total (SSP '000)																											
Total (USD '000)																											
% to total																											

Public sector project
Routine work by government

Private sector project
Routine work by private sector

3.4.6 Development of feed testing and analysis laboratory project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Livestock		
(2) Project name:	Development of feed testing and analysis laboratory project		
(3) Project ID:	0 2 . 0 6 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2020/21	Ending FY: 2029/30	Duration (years): 10
(5) Total investment:	SSP 7,462,000	USD 1,865,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		LS.SA2	Public sector institution and management capacity development	Table 2-3
(2) Government organisation:	09	MLFI-RD	Directorate of Animal and Fisheries Research and Development	Table 2-6
	05;06	MLFI-AP;FA	Directorate of Animal Production and Range Management; Directorate of Fisheries and Aquaculture Development	Table 2-6
(3) Activity types:	203	SP-EX	Service delivery and infrastructure development- Extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	X
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	X
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	X
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income		

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:	<p>To fully develop the poultry, aquaculture and livestock value chains producers must have access to feed. Regardless of the production system followed by the producers there is still a need for feed manufacturers. More specifically, all ruminants require supplementary feed for optimum growth, even on high quality forages and the requirement increases during dry or wet seasons. Moreover, poultry and aquaculture production is highly influenced by feed sources. The goal of feed manufacturing is to produce feed that meets intended specifications in nutritional composition. Feed manufacturing is a very competitive activity and consistent feed quality is a key growth driver. Quality control and assurance have emerged as a critical feature in the business of feed manufacturing. A quality control system involves personnel being properly trained to ensure a high level of organisation, documentation and policing of various procedures and processes necessary to guarantee the basic quality of feed ingredients and feed. The need for a feed analysis and testing laboratory is mandatory for any country's feed manufacturing industry.</p> <p>Laboratory analysis is a critical aspect of a quality control measures. The analysis of raw materials can help the feed manufacturer in 3 specific ways:</p> <ol style="list-style-type: none"> 1. Prediction of nutritive values of feed ingredients 2. Avoiding contaminants 3. Detecting adulterants <p>1) Prediction of nutritive values of feed ingredients: Knowledge of feed ingredient composition is vital for nutritionists in order to meet precisely the nutrient requirements of livestock. The nutrient values in any feed ingredient vary from season to season, source to source, batch to batch and also within a batch. Therefore feed ingredients need to be analysed carefully for their nutritive value before being incorporated into a diet.</p> <p>2) Avoiding contaminants: Substances that are already present in feed ingredients or acquired during processing, handling, and storage that may be harmful to livestock and poultry, are classified as contaminants. Mycotoxins in feed due to mould growth and pesticides used by farmers are examples of contaminants. A feed laboratory detects these contaminants which protects livestock and poultry.</p> <p>3) Detecting adulterants: Intentional contamination of feed is termed adulteration. Some dishonest feed manufacturers adulterate feed ingredients for economic benefit. Examples include adding sand or sawdust to a feed ration to increase weight and volume.</p>
(2) Objectives:	To develop functioning feed analysis laboratories in each operational feed mill plus a central feed analysis laboratory housed at a university or livestock research centre.
(3) Overall description including temporal and spatial extent of project:	This project is primarily a private sector led business and will develop within operating feed mills. However, besides having a functional feed analysis laboratory in each feed mill, there needs to be a central laboratory based at either inside a university or livestock research centre to periodically test the accuracy of private feed mill testing laboratories. This will provide quality control oversight of the feed manufacturing industry. Feed analysis laboratories have become much more technologically advanced during the past 10 years. Each feed mill should have a Near Infrared Spectrometry (NIRS) machine to analyse feed manufactured in their mills. The central laboratory that is based at a university or research centre should be a combination of both a "wet" lab (lab that uses chemical agents to test feed) and have the ability to test feed utilizing a NIRS machine. Each state will need to have at least 1 government employee that serves as an inspector for the private feed industry. This inspector would be empowered to enter private industry feed mills, collect random samples, and take samples back to the central laboratory for testing. Enforcement policy would be determined by the Ministry for those feed mills that are not in compliance with sanitary feeds. This project provides excellent linkages with the crop and fisheries industries. Feed analysis equipment is essential for analysing plant species as well as analysing fish feed to provide nutrient contents.
(4) Component structure:	<p>Component 1: Assessment</p> <p>Component 2: Facility development by private sector with technical assistance from a donor agency.</p> <p>Component 3: Facility development by public sector (central laboratory) with technical assistance from a donor agency.</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1: Assessment</p> <p>Activity 1.1 and Outputs: Field assessment conducted by 2 staff from MLFI of the best</p>
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Items	Information
	<p>location to house the public sector (central) feed analysis laboratory. (3 months)</p> <p>Component 2: Feed analysis laboratory development in operational feed mills Activity 2.1: Identify operational feed mills willing to invest and operate a feed analysis laboratory. Outputs: 1 international consultant will provide technical assistance to feed mills willing to invest in feed analysis equipment. 1 year assignment for international consultant.</p> <p>Component 3: Feed analysis laboratory development for the public sector housed in a central location (preferably in an existing MLFI building in Juba). Activity 3.1: Create a transparent bidding process for the construction of either a new laboratory or remodel a current laboratory to fit the needs of feed analysis methods. Outputs: Contract awarded to competent construction company. Activity 3.2: Construction and/or remodelling of the laboratory at the selected location. Outputs: Costs of constructing a new central laboratory would be approximately the following: Building with laboratory and office space. 185 square meter building~ \$36,980 USD Activity 3.3: Procure all equipment needed to operate a functional “wet” lab with procurement being awarded through a transparent bid process. Outputs: The central laboratory would have “wet” lab capability as well as a modern NIRS machine for quick diagnostics. The costs would be approximately: Wet lab equipment and supplies~ \$25,000 NIRS machine with attached computer and software~ \$6,000 Mycotoxin analysis instrument~ \$2,000 Activity 2.4: Provide technical assistance to this laboratory in order for staff to be trained properly. Outputs: 1 international consultant would spend 6 months training central laboratory staff. Training would take place inside the central laboratory once construction and stocking of equipment has finished. Training would take place for 8 laboratory scientists/5 days per week/6 months.</p> <p>Component 4: Develop an inspection and quality control plan to provide government oversight of the private industry feed manufacturing practices. Activity 4.1: Ministry of Agriculture needs to create policy and legal framework for the oversight, inspection, and enforcement of quality control procedures for private feed mills and feed analysis laboratories. Outputs: This will be completed in CAMP project titled “National and State livestock policy and legal framework establishment and maintenance project”.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<p>Qualified international feed analysis laboratory specialists would be used to train South Sudanese counterparts and help with procurement of laboratory equipment and calibration of equipment. The international team and technical specialists will work with a team of identified professionals from South Sudan.</p> <ul style="list-style-type: none"> • 2 senior level MLFI staff to find a central laboratory location. • 3 senior level scientists with experience in feed testing and analysis laboratory work. • 5 entry level laboratory assistants. • 10 government feed industry inspectors (one for each state). • 1 international consultant (feed analysis specialist). 1 year assignment (6 months) training central laboratory staff and 6 months training feed mill laboratory staff. • 1 international consultant (feed, crop, pesticide, inspection expert) to train 10 government inspectors. 6 month assignment.
(2) Description of beneficiaries within the framework of the project:	<p>Primary beneficiaries are the livestock, poultry, and aquaculture producers of South Sudan because of a local supply of quality feed.</p> <p>Secondary beneficiaries are consumers of animal, poultry and aquaculture protein since the improved quality output by a feed mill will increase protein production.</p>

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	A functioning and profitable feed manufacturing facility that will contribute to the economic growth of the livestock, poultry and aquaculture industries.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right)	<table border="1"> <tr> <td> Negative: a Positive: d </td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society </td> </tr> </table>	Negative: a Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society
Negative: a Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society		

Items	Information
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures	<p>d: will have a significant impact on the environment and/or society</p> <p>(Negative)</p> <ul style="list-style-type: none"> The actual impact to the environment from the laboratory will be minimal. <p>(Positive)</p> <ul style="list-style-type: none"> The positive impact to livestock producers will be substantial. The reason being that contaminants that found in feed that could kill livestock and/or poultry will be identified thereby saving livestock producers livelihoods. Consumers will also benefit by consuming meat products that were produced by being fed quality, non-contaminated feed.

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> No functional feed analysis laboratories in South Sudan
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> A functioning feed analysis laboratory in each operational feed mill A central public sector feed analysis laboratory Legislation that includes inspection and quality control policies for the feed manufacturing industry.
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> Directorate of Planning Private Sector Public Sector
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> Directorate of Animal and Fisheries Research and Development; Directorate of Animal Production and Range Management; Directorate of Fisheries and Aquaculture Development

2.7 Required human resources

(1) Principle of human resources management:	<ul style="list-style-type: none"> Transferring knowledge to the local specialists (capacity building).
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> 2 senior level MLFI staff to find a central laboratory location (assessment). 3 senior level scientists with experience in feed testing and analysis laboratory work. 5 entry level laboratory assistants 10 government feed industry inspectors (one for each state)
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Qualified feed industry consultants. Recommend consultants that have both equipment and business experience. Uncertain on number of actual staff but at least one senior level scientist will be needed to operate feed analysis laboratories in each feed mill. Each scientist would need at least one lab assistant.</p> <ul style="list-style-type: none"> 1 international consultant (feed analysis specialist). 1 year assignment (6 months training central laboratory staff and 6 months training feed mill laboratory staff. 1 international consultant (feed, crop, pesticide, inspection expert) to train 10 government inspectors. 6 month assignment. 1 senior level scientist for each feed mill laboratory. 1 lab assistant for each feed mill laboratory.

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	<p>H L: Low M: Medium H: High (select an indicator from the list)</p>
(2) Explanation of expected risks:	<p>The risks are multiple. First is finding qualified scientists in South Sudan that have the expertise or background to be trained in this specialized field of laboratory work. Second is procuring the equipment necessary to test feed. The equipment is expensive and feed mills have to be committed to investing in this equipment as part of their overall feed mill investment plan.</p>

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	<p>This is a private sector and public sector function.</p>
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<ul style="list-style-type: none"> There will need to be ongoing training of scientist and staff in the private and public sectors. Routine maintenance and upkeep of laboratory equipment and supplies. Routine inspection from government inspection officers will need to take place for the private industry. Samples will be collected by government inspectors and then taken to be tested at the central laboratory. Up to date computer equipment and specialized software specific to feed analysis laboratories will be needed and updated periodically. Transportation allowances for government feed inspector staff. Communication allowances (cell phone and internet capability) for laboratory staff and government feed inspector staff. <p>Human resources in the public sector (ongoing):</p> <ul style="list-style-type: none"> At least 3 senior level scientists with experience in feed testing and analysis laboratory work.
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Items	Information
	<ul style="list-style-type: none">• At least 5 entry level laboratory assistants.• At least 10 government feed industry inspectors (one for each state). Human resources in the private sector (ongoing): <ul style="list-style-type: none">• 1 senior level scientist to operate feed analysis laboratory for each feed mill.• 1 staff assistant to provide basic office duties for each feed mill.

3.4.7 Development of livestock marketing project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Livestock		
(2) Project name:	Development of livestock marketing project		
(3) Project ID:	0 2 . 0 7 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2018/19	Ending FY: 2022/23	Duration (years): 5
(5) Total investment:	SSP 5,456,000	USD 1,364,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		LS.SA6	Livestock production and processing enhancement	Table 2-3
(2) Government organisation:	05	MLFI-AP	Directorate of Animal Production and Range Management	Table 2-6
	04	MLFI-IM	Directorate of Investment, Marketing, and Supplies	Table 2-6
(3) Activity types:	301	PS-PR	Private Sector-Production	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	X
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	
	84	LK	Lakes State	
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	X
	06	PS	Private sector project	X
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	X
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

The considerable price risk and costs in livestock marketing in South Sudan arise naturally as the result of several factors: pastoralists' multiple objectives in livestock holding; a legacy of limited private marketing capacity; considerable environmental variation; rudimentary physical infrastructure; weak rural institutions for market information dissemination; price formation and contract enforcement; assurance of physical security; and, preventive animal health services. The effect of the factors appears in the form of high transaction costs to livestock marketing; inelastic demand and supply that lead to considerable price variability; and, low average livestock prices received by producers. The weaknesses of the marketing system impose enormous direct and indirect costs on South Sudanese pastoralists and livestock producers. With all of these negative factors listed above, the following provides some positive factors: The CAMP Situation Analysis Report (December, 2013) states:

In urban areas, the demand for animal source foods is high and will continue to grow driven by population growth (2.43% per annum) and the rapid urbanization that has characterized South Sudan since the CPA. Juba is the fastest growing city in Africa, estimated to grow at more than 20% annually, propelled by the increased expenditure by government and new inflows of money from growth of the services and construction sectors, small businesses and development aid. Incomes grew from USD 90 in 2004 to USD 500 in 2010.

Due to this growth there is tremendous potential to market livestock (ruminants) and livestock products. This project is crucial so that the livelihoods of the rural poor in South Sudan can be improved.

There are areas of livestock production showing emerging trends for commercialization and where target interventions could unlock immediate bottlenecks in the sector and drive competitiveness.

Hides and Skins
There is an annual production of 170,000 hides and 1, 6 million skins but the economic value of these by products is hardly realized due to the absence of an organized hide and skin market.

Milk
Only 10% of all milk collected locally is sold in the market and goat and sheep milk production is completely neglected. Of the total milk produced, it has been claimed 90% is consumed at home. Therefore; there is a need to invest in capacity building and a shift in attitudes.

Poultry
South Sudan is mainly relying on subsistence and household poultry production. However with the increasing population there is high demand for white meat. Currently south Sudan is experiencing high imports of chicken meat and eggs. Therefore, there is a need to stimulate local production to satisfy domestic needs for chicken, eggs and other types of birds. This in turn will improve rural household income and food security.

Beekeeping
Beekeeping is an important livelihood strategy in many rural communities of South Sudan. There is an overall lack of training, funding and lack of organized markets for bee products. This segment of the livestock industry needs enhancement to foster household income and greater rural economy development.

Conflicts due to competition for grazing land and watering resources are further affecting livestock marketing negatively; this requires policy interventions by MLFI. Pastoralists need access to market towns and also identified border trade points. Livestock transportation policy is necessary for a functional livestock marketing system. Also regional trade policy is needed for harmonization of regulations and establishment of appropriate standards for trading of livestock.

(2) Objectives:

- To create a modern livestock market system that transforms the traditional (lack of advertising, branding, technology) livestock markets to modern systems. Modern systems will incorporate branding, packaging, advertising, and social media to coordinate with all actors within the industry from the producer all the way up the value chain to the export market.
- Provide training to cooperative groups and associations in the areas of animal product marketing.

Items	Information
(3) Overall description including temporal and spatial extent of project:	<p>• A consistent and accessible marketing system for all livestock producers to form a profit base and export channels.</p> <p>Livestock sector marketing needs to be private sector driven. The government of South Sudan in partnership with donor agencies can provide technical assistance and help with coordination of marketing events such as trade shows. South Sudan has no formal livestock market and value chain study that has been published. The first part of this project will be the assessment of all livestock value chains in South Sudan and the current state of livestock product marketing. Data from this assessment will be published and will serve as a starting point on where to concentrate efforts in strengthening weaknesses found in the livestock market. An example of a good livestock marketing study is the USAID funded study done in neighbouring Kenya in 2006. The study is titled: "Kenya Livestock Sector Study: An analysis of pastoralist livestock products market value chains and potential external markets for live animals and meat". This type of study should be replicated in South Sudan. There are a number of CAMP Project Profile sheets that focus on the development of cooperatives and associations in meat, dairy, poultry, and beekeeping. Marketing training would be targeted to these newly formed cooperatives. Cooperatives will have better success in marketing their products than individuals who have to embark on marketing channels on their own.</p>
(4) Component structure:	<p>Component 1: Livestock market value chain study Component 2: Training Component 3: Trade shows</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1: Livestock market value chain study Activity 1.1: A team consisting of international and national specialists will conduct an in-depth livestock market value chain study for South Sudan. Outputs: The team will consist of the following: 1 international marketing consultant (background in livestock value chains) 2 MLFI livestock marketing or agribusiness officers The team will take 1 year to complete an in-depth study of all livestock value chains in South Sudan including: meat, hides and skins, dairy, poultry, eggs, and beekeeping. This study will be published and made available to all stakeholders.</p> <p>Component 2: Training Activity 2.1: A training team consisting of international and national specialists will develop training a curriculum for existing livestock value chain cooperatives throughout South Sudan. Training will be then implemented using the developed curriculum to as many cooperatives as possible. Marketing training subjects would include: branding, packaging, promotional techniques, value of cooperatives in marketing their products, basic financial management, importance of producing quality products, and using modern technology for advertising. Outputs: The training team will consist of the following: 1 international marketing consultant (background in livestock value chains) 2 MLFI livestock marketing or agribusiness officers 10 state livestock extension workers (1 from each state and those chosen that have marketing backgrounds). Training would consist of 3 days at each cooperative. The number of cooperatives trained is difficult to quantify because they have not been formed. However, rough estimates would be at least 20 cooperatives (2 from each state) for a total 60 days of training. The main training team, consisting of the international consultant and 2 MLFI officers, would be at every training session, but the state livestock extension workers would only be at the training located in their state.</p> <p>Component 3: Trade shows Activity 3.1: A marketing team will assist cooperatives in developing and implementing a national livestock products trade show and exhibition in Juba. Outputs: A marketing team would consist of the following: 1 international marketing consultant (background in livestock value chains) 1 international trade show consultant 5 MLFI livestock marketing or agribusiness officers 5 MLFI livestock extension officers 20 college students from local universities that are majoring in marketing or agribusiness. These students would be paid interns to help implement the trade show. A 5 day trade show would take place in Juba where livestock producers from throughout South Sudan can bring their products to showcase and sell. This will help promote rural products, create linkages with vendors and stores, and hopefully start a tradition of holding an annual trade show. Implementing trade shows takes long hours and hard work. This trade show would take at least 1 year to plan before implementation. The South Sudanese government in cooperation with a donor</p>
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Items	Information										
	agency would have to provide the seed funding for this trade show. It would be expected that industry vendors would pay vendor fees. Vendor fee revenue would go towards implementing future trade shows. After approximately 3 years it would be expected that the trade show would be a private sector, self-sustainable event.										
2.3 Service providers and beneficiaries											
(1) Description of service providers within the framework of the project:	Service providers for this project include international consultants specializing in the marketing of livestock products such as meat, dairy, and poultry. National specialists from MLFI would also provide service and would need to have agribusiness and/or marketing backgrounds.										
(2) Description of beneficiaries within the framework of the project:	The primary beneficiaries are livestock producers. They will have marketing channels created to sell their products and generate income. The secondary beneficiaries are the consumers of livestock products in South Sudan.										
2.4 Outcomes, impact and contributions to value added (i.e. economic growth)											
(1) Outcomes and impact:	A functional and sustainable livestock marketing system that allows producers and consumers to have economic and physical access to potential domestic and trans – boundary markets for livestock and livestock products.										
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)										
2.5 Environmental and social impact, and mitigation measures											
(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1" style="width: 100%;"> <tr> <td style="width: 20%;">Negative: a</td> <td>Project:</td> </tr> <tr> <td>Positive: d</td> <td>a: is likely to have minimal or little impact on the environment and/or society</td> </tr> <tr> <td></td> <td>b: may have an impact on the environment and/or society</td> </tr> <tr> <td></td> <td>c: is likely to have a significant impact on the environment and/or society</td> </tr> <tr> <td></td> <td>d: will have a significant impact on the environment and/or society</td> </tr> </table>	Negative: a	Project:	Positive: d	a: is likely to have minimal or little impact on the environment and/or society		b: may have an impact on the environment and/or society		c: is likely to have a significant impact on the environment and/or society		d: will have a significant impact on the environment and/or society
Negative: a	Project:										
Positive: d	a: is likely to have minimal or little impact on the environment and/or society										
	b: may have an impact on the environment and/or society										
	c: is likely to have a significant impact on the environment and/or society										
	d: will have a significant impact on the environment and/or society										
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • Since this project concentrates on conducting a study and training there is no harm or impact to the environment. <p>(Positive)</p> <ul style="list-style-type: none"> • Creating marketing channels has a significant positive impact on rural producers, women's groups, and all stakeholders in the livestock industry by generating income and creating food security. 										
2.6 Monitoring and evaluation for impact measurement											
(1) Measurable indicators and situation at a starting point:	• No known marketing channels in South Sudan										
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • Published livestock market value chain study • Number of cooperatives trained • Annual trade show exhibition 										
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> • Published study • Training attendance sheets • Trade show survey completed 										
(4) Responsible parties for the monitoring and evaluation:	• Directorate of Animal Production and Range Management; Directorate of Investment, Marketing and Supplies										
2.7 Required human resources											
(1) Principle of human resources management:	• Specialists in livestock marketing and agribusiness are essential to this project.										
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> • 5 mid-level or senior MLFI livestock marketing or agribusiness officers • 5 junior or mid-level MLFI livestock extension officers • 20 college students from local universities that are majoring in marketing or agribusiness. These students would be paid interns to help implement the trade show. 										
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<ul style="list-style-type: none"> • 1 international marketing consultant (background in livestock value chains). 2 year assignment. • 1 international trade show consultant. 1 year assignment. 										
2.8 Risk assessment with respect to project objectives and resources to be applied											
(1) Expected level of risk:	Low L: Low M: Medium H: High (select an indicator from the list)										
(2) Explanation of expected risks:	The risk associated with this project is low. There currently is no known marketing system in South Sudan. Any progress made through this project is a positive with no risk.										
2.9 Other special considerations and/or notes											
(1) Other special considerations and/or notes:	This is a private sector and public sector partnership with and cross ministry cooperation.										
2.10 Routine operation and required resources after the completion of the project											
(1) Description of routine	Human resources on-going:										

Items	Information
<p>activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.</p>	<ul style="list-style-type: none"> • 2 mid-level or senior MLFI livestock marketing or agribusiness officers • 2 junior or mid-level MLFI livestock extension officers • 20 college students from local universities that are majoring in marketing or agribusiness. These students would be paid interns to help implement the trade show (these interns would be temporary workers working possibly only 3 months out of the year). <p>On-going expenses:</p> <ul style="list-style-type: none"> • Communication allowances • Transportation allowances • Computers • Office maintenance and supplies

Part 3: Project cost estimation

Project duration	SSP/USD = 4																												
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	Total	% to total		
1 Management and operation of project																													
1 Deployment of government staff																													
1 Market value chain study (per diem)																													
2 Market value chain study (transportation)																													
3 Training for cooperatives (per diem)																													
4 Training for cooperatives (transportation)																													
2 Procurement of administrative services (contracted)																													
1 Printing of the livestock market value chain report																													
3 Procurement of professional services (contracted)																													
1 International consultant (marketing)																													
2 International consultant (trade show)																													
4 Implementation of staff training																													
5 Implementation of research, studies and surveys																													
6 Delivery of extension and training services to the private sector																													
7 Operation and maintenance																													
2 Construction of infrastructure and procurement of equipment																													
1 Construction of office buildings																													
2 Construction of research, training and other specialized buildings																													
3 Construction of feeder roads																													
4 Construction of production, market and transportation facilities																													
5 Acquisition of land																													
6 Procurement of vehicles																													
7 Procurement of equipment																													
3 Subsidies, equity and loans																													
1 Provision of cash and/or in-kind subsidies																													
1 Support livestock trade show and exhibition (3-5 days in Juba)																													
2 Provision of training services to the private sector																													
3 Equity investments																													
4 Provision of loans																													
5 Social assistance/donation (Emergency)																													
Total (SSP '000)																													
Total (USD '000)																													
% to total																													

Public sector project
Routine work by government
Private sector project
Routine work by private sector

3.4.8 Development of livestock water catchment and watering areas project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Livestock		
(2) Project name:	Development of livestock water catchment and watering areas project		
(3) Project ID:	0 2 . 0 8 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2020/21	Ending FY: 2029/30	Duration (years): 10
(5) Total investment:	SSP 16,833,000	USD 4,208,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		LS.SA3	Public infrastructure development	Table 2-3
(2) Government organisation:	05	MLFI-AP	Directorate of Animal Production and Range Management	Table 2-6
	02:08	MLFI-SC;EX	Directorate of State Coordination and Special Projects; Directorate of Livestock and Fisheries Extension	Table 2-6
(3) Activity types:	209	SP-EI	SD/ID Economic infrastructure development	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	X
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	X
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	X
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income		

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

Water is an important natural resource. It is a critical nutrient for livestock production yet it is often mismanaged. Fresh clean water is important for efficient animal production. One area in which the national government can assist livestock producers regardless of herd size is with the identification and construction of community water access points in strategically located areas. The targeted areas should be in regions with large numbers of livestock. Providing water access points could lead to stability by reducing conflict over access to fresh water and allowing open access. Moreover, the program is consistent with pastoralist programs being promoted in Uganda and Kenya which are addressing water access points.

The excavation of water catchments in identified areas in the dry regions of South Sudan will control livestock movement within specific grazing allotments. This will help reduce the incidents of conflict over water sources, green pastures and other related problems such as cattle raiding and abduction of children. Disease control will be easier as the diseases can be treated at the place where the outbreak occurs before it spreads to other livestock settlements. The long distance that livestock will have to travel for water will be reduced thus reducing energy loss.

Livestock across the country depend on natural water bodies as the main sources of water. The seasonality of these sources is one of the triggers of migration and of inter-community conflict over scarce water during prolonged dry seasons and periods of drought. The trend is towards more permanent water resources or to areas where it is possible to dig temporary wells. In the past, development of water infrastructure, such as haffirs (manmade lake/ water reservoir), was common, as documented in the 1955 Government of Sudan report. Pastoral communities hand dig micro-scale haffirs, but these are often too shallow and inadequate for their needs, drying up during the dry season. According to the CAMP situation analysis report (December 2013), a 30 million cubic-meter water haffir was constructed under the South Sudan Recovery Fund in Jie, Kapoeta East County. This curtailed Toposa migration for the first time in the living memory of the community, deflecting the occurrence of tensions and violent conflicts often associated with the migration. A successful project such as this could be duplicated elsewhere in South Sudan within the framework of this project. There is a caution however, such large infrastructures are costly and could lead to degradation of rangelands. More localised infrastructure, which is aligned to rangeland resources, cheaper and amendable to community management, is also needed.

(2) Objectives:

To address the need for water access points for the livestock industry and train individuals in the management and proper maintenance of constructed water catchment areas.

(3) Overall description including temporal and spatial extent of project:

This project will identify water access points for livestock, design the appropriate method for water harvesting, arrange for financing and construct the facility. Training modules will be developed and delivered while developing water user associations.

Another major goal of the project is to refine and disseminate regional and national maps on water resources. These activities strengthen community management of these infrastructures to enhance sustainability. It will support knowledge management, and coordinate identification of sites for development of water infrastructure.

A pond, no matter how well planned and built, must be maintained in order to preserve its storage capacity as well as proper functioning of the watering facilities throughout its expected life. When fenced, a pond needs permanent maintenance in order to ensure the integrity of the fence during the whole period of presence of water in the reservoir. However this can be costly if maintenance is ignored. Livestock can knock fences down if left unattended thus resulting in the purchase of new fencing. In the case of non-fenced ponds, the main objective of maintenance is to remove the wind or water transported material (soil and silt) which accumulates and decreases the storage capacity of the pond. This operation is necessary every 4 to 5 years.

(4) Component structure:

- Component 1: Develop a needs assessment.
- Component 2: Design and construct livestock watering facilities
- Component 3: Formation of water associations
- Component 4: Design and implement training modules

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

Component 1: Develop a needs assessment.
 Activity 1.1: An assessment team consisting of international and national specialists will conduct a needs assessment including the following criteria:
 Review of livestock migratory routes for water access
 Review and identify high livestock populations for water access
 Review soil types and condition of surrounding rangelands as part of the

Items	Information
	<p>identification process for water catchments Determine areas that have a history of conflict with watering livestock and make these locations a priority when constructing water catchments Outputs: The assessment team will consist of the following individuals: 1 international consultant (assessment specialist) 1 international consultant (hydrologist with experience in constructing water structures) 1 international consultant (GPS/GIS specialist with extensive mapping experience) 2 senior level MLFI Range Management officers 2 senior level Ministry of Water Resources and Irrigation (MWRI) officers This assessment team will visit existing catchment areas throughout South Sudan to determine successes and failures. The team will conduct extensive field visits to interview tribal leaders, county CAHWs, state government officers, and other community leaders to determine politically viable areas for constructing water catchments. This information along with the technical data collected will be written, published, and shared with all stakeholders. The assessment will take 8 months to complete.</p> <p>Component 2: Design and construct livestock watering facilities Activity 2.1: A design and implementation team will create schematics for the construction of water catchment areas along with specifics on whether they will be catchment, borehole wells, solar, or wind mill powered. With this activity it is important to finalize financing and gain the proper approvals. Outputs: A design and implementation team consisting of the following individuals will complete this activity: international consultant (hydrologist with experience in constructing water structures) 1 international consultant (GPS/GIS specialist with extensive mapping experience) 2 senior level MLFI Range Management officers 2 senior level Ministry of Water Resources and Irrigation (MWRI) officers This team will present their schematics and construction plans to the government agency and/or donor agency that will be financing the construction.</p> <p>Activity 2.2: Complete a transparent bidding process and once a contractor is chosen construct watering areas based on approved schematics and financing plans. Outputs: It is difficult if not impossible to quantify the exact number of water catchment areas that will be constructed until financial donors are committed. The following statement comes from the CAMP Situation Analysis report and the specified locations would be good areas to start construction of watering areas: "Three haffirs are being constructed within the Greater Kapoeta area. Haffirs are planned in Duk, Pibor, Ayod and Akobo Counties under SSRF funding in areas most prone to water related conflicts after the success of four haffirs in Nyirol and Uror Counties. SSRF also funded two haffirs in Tonj East, Warrap State". With this information it is logical to start with at least 9 water catchment areas (referred to from now on as haffirs). An estimated cost per haffir that averages 5,000 cubic meters would be: \$55/cubic meter (using a backhoe for digging) x 5,000 cubic meter capacity pond= \$275,000 per pond. This price could go up if more sophisticated technology such as drilling boreholes for wells, wind mill or solar power for pumping water from wells, etc. It is estimated that construction could take at least 1 year and possibly longer to complete 9 haffirs.</p> <p>Component 3. Formation of water associations Activity 3.1: A team of international and national specialists will form water association groups. Each group will be formed around the locale of the newly constructed haffir. Outputs: The water association team will consist of: 1 international cooperative/association development specialist 2 senior level MLFI Range Management officers 2 senior level Ministry of Water Resources and Irrigation (MWRI) officers Water associations would be developed as soon as construction is completed on a specific structure. For this reason it is difficult to quantify a time period. The international consultant would be brought in after a series of haffirs have been completed for short term assignments. Each short term assignment could last 3 months.</p> <p>Component 4. Design and implement training modules Activity 3.1: A training team consisting of international and national specialists will provide training seminars to users of the newly constructed haffirs. Training will consist of proper use, maintenance, conflict resolution, and importance of clean</p>

Items	Information
	<p>water for livestock.</p> <p>Outputs: The training team will consist of:</p> <ul style="list-style-type: none"> 1 international consultant (hydrologist with experience in constructing water structures) 1 senior level MLFI Range Management officer 1 senior level Ministry of Water Resources and Irrigation (MWRI) officer <p>Once the first round of haffirs has been constructed the team will conduct a 5 day training for the users of the haffir. The training will take place at the location of the haffir. After this first training phase, the international consultant will no longer be needed and the MLFI and MWRI specialists will be expected to conduct future training as haffirs are constructed.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<ul style="list-style-type: none"> • Technical engineers that understand hydrology and building structures • Specialists in boreholes and drilling • Specialists in catchment hardware • Assessment specialists • Cooperative/association development specialists
(2) Description of beneficiaries within the framework of the project:	The primary beneficiaries are all livestock producers within the locale of the newly constructed haffirs.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	Water access points will be constructed for livestock in crucial areas. This will have a major impact on animal care, production, efficiency and an expected decrease in water related conflicts.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right)	<table border="1" style="width: 100%;"> <tr> <td style="width: 15%;">Negative: d</td> <td>Project:</td> </tr> <tr> <td>Positive: c</td> <td>a: is likely to have minimal or little impact on the environment and/or society</td> </tr> <tr> <td></td> <td>b: may have an impact on the environment and/or society</td> </tr> <tr> <td></td> <td>c: is likely to have a significant impact on the environment and/or society</td> </tr> <tr> <td></td> <td>d: will have a significant impact on the environment and/or society</td> </tr> </table>	Negative: d	Project:	Positive: c	a: is likely to have minimal or little impact on the environment and/or society		b: may have an impact on the environment and/or society		c: is likely to have a significant impact on the environment and/or society		d: will have a significant impact on the environment and/or society
Negative: d	Project:										
Positive: c	a: is likely to have minimal or little impact on the environment and/or society										
	b: may have an impact on the environment and/or society										
	c: is likely to have a significant impact on the environment and/or society										
	d: will have a significant impact on the environment and/or society										
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • Permanent water structures can be the source of negative environmental impacts. Livestock tend to loiter at water holes, degrading the land and soil, as well as overgrazing the area around watering sources. To reduce this impact MLFI Range officers need to work with water associations to implement proper range management plans. <p>(Positive)</p> <ul style="list-style-type: none"> • Construction of haffirs in key locations will provide a positive impact. They will provide water to thirsty livestock and help to reduce the amount of conflict caused from water issues. 										

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • 1 constructed water catchment area and / or haffirs funded by donor agencies + 9 additional ones in early planning stages. • No training curriculum created or implemented. • No water user associations currently exist.
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • Number of identified haffirs. • Quantity of training given. • Number of water user associations developed.
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> • Assessment documents • Construction approvals • Number of reported working access points as counted by local officials • Attendance sheets from training
(4) Responsible parties for the monitoring and evaluation:	• Directorate of Animal Production and Range Management; Directorate of State Coordination and Special Projects; Directorate of Livestock and Fisheries Extension

2.7 Required human resources

(1) Principle of human resources management:	• Providing capacity building for those employees responsible for constructing and maintaining water catchment areas.
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> • 2 senior level MLFI range management officers • 2 senior level Ministry of Water Resources and Irrigation (MWRI) officers
(3) Required human resources in the private sector including	<ul style="list-style-type: none"> • 1 international consultant (assessment specialist). 6 month assignment. • 1 international consultant (hydrologist with experience in constructing water structures).

Items	Information
consultants (positions, qualification and numbers):	2 year assignment. • 1 international consultant (GPS/GIS specialist with extensive mapping experience). 1 year assignment. • 1 international cooperative/association development specialist. 3 month assignment x 3 assignments (9 months total).

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	<table border="1"> <tr> <td>H</td> <td>L: Low</td> <td>M: Medium</td> <td>H: High</td> <td>(select an indicator from the list)</td> </tr> </table>	H	L: Low	M: Medium	H: High	(select an indicator from the list)
H	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	Risk assessment is high with this project. First water is a valuable resource and can lead to conflict. There are several areas involved and again the possibility for conflict between various tribes exists. The key to solving conflict is to insure haffirs are constructed in areas where all tribes are in agreement. Solutions for developing water access points are unlimited but could be very costly.					

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	Special consideration should be given to the actual location where these catchments are constructed in relation to access for women. In areas where women tend to the livestock it is important they have quick access to water points so that they are close to home. Women should also hold positions of leadership within the water associations.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	Human resources (on-going): For monitoring and helping maintain haffirs: <ul style="list-style-type: none"> • 2 senior level MLFI range management officers • 2 senior level Ministry of Water Resources and Irrigation (MWRI) officers • 10 state livestock/rangeland officers (one per state) • 2 mid-level national administrative staff Other on-going expenses: <ul style="list-style-type: none"> • Communication allowance (cell phone and internet) • Transportation allowances • Computers • Office maintenance and supplies
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Part 3: Project cost estimation

Project duration	SSP/USD = 4												Total	% to total													
	Phase 1			Phase 2			Phase 3			Phase 4																	
Cost group	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	total	
1 Management and operation of project																											
1 Deployment of government staff																											
1 Need assessment survey (per diem)																											
2 Need assessment survey (transportation)																											
3 Water association formation (per diem)																											
4 Water association formation (transportation)																											
5 Water association training (per diem)																											
6 Water association training (transportation)																											
2 Procurement of administrative services (contracted)																											
3 Procurement of professional services (contracted)																											
1 International consultant (assessment)																											
2 International consultant (hydrology)																											
3 International consultant (GPS/GIS)																											
4 International consultant (cooperative development)																											
4 Implementation of staff training																											
5 Implementation of research, studies and surveys																											
6 Delivery of extension and training services to the private sector																											
7 Operation and maintenance																											
1 Fuels for need assessment survey at 10 sites																											
2 Fuels for water association formation at 9 sites																											
3 Fuels for water association training at 9 sites																											
4 Fuels for monitoring and follow up at 9 sites																											
2 Construction of infrastructure and procurement of equipment																											
1 Construction of office buildings																											
2 Construction of research, training and other specialized buildings																											
3 Construction of feeder roads																											
4 Construction of production, market and transportation facilities																											
1 Construction of water facilities at 9 sites																											
5 Acquisition of land																											
6 Procurement of vehicles																											
7 Procurement of equipment																											
3 Subsidies, equity and loans																											
1 Provision of cash and/or in-kind subsidies																											
2 Provision of training services to the private sector																											
3 Equity investments																											
4 Provision of loans																											
5 Social assistance/donation (Emergency)																											
Total (SSP '000)																											
Total (USD '000)																											
% to total																											

Public sector project
Routine work by government
Private sector project
Routine work by private sector

3.4.9 Formulation of animal health and disease control plan project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Livestock		
(2) Project name:	Formulation of animal health and disease control plan project		
(3) Project ID:	0 2 . 0 9 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2020/21	Ending FY: 2029/30	Duration (years): 10
(5) Total investment:	SSP 4,322,000	USD 1,080,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		LS.SA5	Animal health and disease control services	Table 2-3
(2) Government organisation:	07	MLFI-VS	Directorate of Veterinary Services	Table 2-6
	05;09	MLFI-EX;RD	Directorate of Livestock and Fisheries Extension; Directorate of Livestock and Fisheries Research	Table 2-6
(3) Activity types:	104	ID-IM	Institutional development- Implementation and monitoring	Table 2-12
	203	SP-EX	Service delivery and infrastructure development- Extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	X
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income		

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>An animal disease emergency such as an outbreak of a trans-boundary animal disease – TAD (i.e. Foot and Mouth disease, Anthrax, Bird flu, African swine fever and Rinderpest) can have serious socio-economic consequences that may affect the whole national economy. If a new disease can be recognized quickly while it is still localized and prompt action taken to contain and then progressively eliminate it, the chances of eradication of the disease are enhanced greatly. Otherwise, eradication may be extremely difficult, costly and even impossible if the disease is not recognized and appropriate control action taken before it becomes widespread or established in wildlife.</p> <p>The target should always be to eliminate progressively and finally eradicate a trans-boundary animal disease. The alternative approach of simply “living with the disease” through the institution of routine vaccination campaigns and/or other disease control measures will in the end prove far more costly and will be a permanent constraint to efficient livestock production systems. Furthermore, the continuing presence of a harmful disease in a country, even if losses are minimized by effective disease control programs, will inhibit the opening of export trade opportunities for livestock and livestock products. Eradication of the disease and provision of scientific proof of freedom from the disease to a level of international acceptability will remove this constraint to international trade.</p> <p>Contingency planning and other preparedness programs for animal disease emergencies should be regarded as providing the key to mounting early effective action in the event of an emergency. These should be recognized as some of the more important core functions of national animal health services.</p>
(2) Objectives:	<p>Develop a comprehensive animal health and disease outbreak reporting, investigation and emergency response plan that is inclusive of veterinarian services at the state, national and regional levels as well as civil service organizations and private farmers.</p>
(3) Overall description including temporal and spatial extent of project:	<p>The two fundamental components of animal disease emergency preparedness planning are the development of capabilities for:</p> <ul style="list-style-type: none"> • Early warning • Early reaction to disease epidemics and other animal health emergencies. <p>Early warning of diseases Early warning enables rapid detection of the introduction of, or sudden increase in, the incidence of any disease of livestock which has the potential of developing to epidemic proportions and/or causing serious socio-economic consequences or public health concerns. It embraces all initiatives, mainly based on disease surveillance, reporting and epidemiological analysis that would lead to improved awareness and knowledge of the distribution and behavior of disease outbreaks.</p> <p>The success of a country's capability for rapid detection of the introduction or increased incidence of trans-boundary and potentially epidemic animal diseases depends on:</p> <ul style="list-style-type: none"> • Good farmer and public awareness programs for high-threat epidemic livestock diseases that involve improving the veterinary/farmer interface; • Training of field veterinary officers and veterinary auxiliary staff (such as livestock extension workers) in the clinical and gross pathological recognition of serious epidemic livestock diseases; collection and transportation of diagnostic specimens; and the need for prompt action; • Sustained active disease surveillance to supplement passive monitoring, based on close coordination between field and laboratory/epidemiology veterinary services, and use of techniques such as participatory questionnaires, serological surveys and harvest facility monitoring to supplement field searching for clinical disease; • Establishment of reliable livestock identification systems for enhancement of disease-tracking capabilities; • Dependable emergency disease-reporting mechanisms to regional and/or national/veterinary headquarters; • Implementation of an emergency disease information system; • Enhancement of laboratory diagnostic capabilities for priority diseases within regional and national diagnostic laboratories; • Prompt and international disease reporting to the World Organization for Animal Health (OIE) and neighbouring countries. • Inclusion of early warning in contingency planning for livestock disease epidemics. <p>Early reaction to disease outbreaks Early reaction means carrying out without delay the disease control activities needed to contain the outbreak and then to eliminate the disease and infection in the shortest possible time and in the most cost-effective way.</p>

Items	Information
	<p>For this to be achieved, the following elements need to be in place:</p> <ul style="list-style-type: none"> • Development of national emergency disease contingency plans, both generic and for specific identified high-risk diseases, which should be established, tested and refined through simulation exercises; • Establishment of a national animal disease emergency planning committee; • Installation of diagnostic capabilities for all high-threat diseases. These should be fully developed and tested in national and regional diagnostic laboratories and linkages established with world and regional reference laboratories; • Ensured arrangements for involvement of the private sector (i.e.. livestock farmers' organizations, veterinary practitioners, livestock traders, commercial farming companies, animal product processors and exporters); • Arrangement for epidemic livestock diseases to be included in national disaster plans so that the police, army and other services can be involved as and when necessary; • Preparation of legislative and administrative frameworks to permit all necessary disease control actions to be implemented without delay; • Arrangements whereby funding for disease control campaigns can be quickly provided; • Provision of trained personnel and other necessary resources; • Compensation arrangements whereby farmers or others can be paid fair and quick compensation for any animals or other property destroyed as part of a disease control campaign; • Ensured access to quality-assured vaccines (containing the appropriate antigenic strain(s) for likely disease outbreaks) through a vaccine bank or from other sources; • Harmonization of disease control programmes and cooperation with neighbouring countries to ensure a regional approach; • Take into consideration local and regional variations in animal husbandry practices; • Target hygiene rules for prevention; • Impose stricter animal movement controls; • Facilitate the financial compensation of owners, allowing the humane culling of the infected animals.
(4) Component structure:	<p>Component 1: Generic and disease-specific written contingency plans and operating procedures.</p> <p>Component 2: The testing of written plans and training of staff and the development of capabilities at national, regional, and local veterinary headquarters.</p> <p>Component 3: Development of mechanisms to involve other necessary government and private sector services and farming communities in the emergency response.</p> <p>Component 4: development of the capacity to apply all the necessary resources to counter the disease or other animal health emergency in the most efficient way (including equipment, personnel and finances</p> <p>Component 5: Advanced establishment of the appropriate legal and administrative structures to deal with an emergency.</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs

<p>Component 1: Generic and disease-specific written contingency plans and operating procedures.</p> <p>Activity 1.1: The Directorate of Veterinary Services in partnership with Directorate of Animal Production and Range Management, state government agriculture officers, and donor agency hired international veterinarian consultants will write an overall generic operating plan in case of a disease outbreak. In addition to a generic plan, contingency plans will be written for specific diseases such as Foot and Mouth disease.</p> <p>Outputs: A generic and disease specific emergency response plan that is published and available to all of the livestock industry, government/state/local agricultural offices, and civil service organizations such as police and army officials.</p> <p>Human resource outputs include:</p> <ul style="list-style-type: none"> 3- Senior level veterinarians from Directorate of Veterinary Services to serve on the emergency response team. 3- Senior level livestock specialists from the Directorate of Animal Production and Range Management. 10- Senior level state government agriculture officers (1 from each state). 2- International consultants (veterinarians) with experience in emergency disease outbreak protocols. <p>The process of writing these plans will take 6 months, working 5 days per week, and will take place in Juba.</p> <p>Component 2: The testing of written plans and training of staff and the development of capabilities at national, regional, and local veterinary headquarters.</p> <p>Activity 2.1: Testing of the published written emergency plans should be done by simulating an actual disease outbreak. This simulation should take place annually and involve Directorate of Veterinary Services, Directorate of Animal Production</p>

Items	Information
	<p>and Range Management, State government agriculture officers, and civil service authorities.</p> <p>Outputs: South Sudan will be ready for emergency livestock or poultry disease outbreaks as a result of holding annual simulations. The number of people participating in annual simulations is difficult to quantify. However the following minimum amount of people should participate:</p> <ul style="list-style-type: none"> 10- staff from Directorate of Veterinary Services 10- staff from Directorate of Animal Production and Range Management 10- staff from Directorate of Livestock and Fisheries Extension 5- senior officers from the military 5- enlisted soldiers from the military 15- police officers (from the state where simulation is taking place) 15 CAHW workers (from the state where simulation is taking place) 2- International consultants (veterinarians) with experience in emergency disease outbreak protocols (only for the first simulation). <p>Simulations would last 5 days and will rotate to a different state each year with the first simulation taking place in Juba.</p> <p>Component 3: Development of mechanisms to involve other necessary government and private sector services and farming communities in the emergency response.</p> <p>Activity 3.1: The Directorate of Veterinary Services should take the lead on organizing annual livestock and poultry disease public meetings in each state. At these meetings veterinarians from the Directorate can update the public and other government agencies on the current conditions of disease prevalence in the country as well as educate the public on how they can help prevent disease outbreaks.</p> <p>Outputs: The public will be educated on methods they can use in farming practices to prevent the spread of disease. The public and other government agencies will be aware annually of any new threats of disease in their state.</p> <p>Component 4: Development of the capacity to apply all the necessary resources to counter the disease or other animal health emergency in the most efficient way (including equipment, personnel and finances).</p> <p>Activity 4.1 and Outputs: Please refer to the Activity and Output description under Component 5.</p> <p>Component 5: Advanced establishment of the appropriate legal and administrative structures to deal with an emergency.</p> <p>Activity 5.1: National and State governments must create legislation to put aside emergency funds in the event there is a disease outbreak. On an annual basis funds should be set aside and then if not utilized by the end of the fiscal year, these funds could be utilized in simulation practices. Proper legislative authority must be given to the Directorate of Veterinary Services to call upon state and local governments, police, and military in extreme cases to isolate and eradicate any disease outbreak.</p> <p>Outputs: The Directorate of Veterinary Services will be provided an annual emergency funding line item in their budget. They will also be given the legislative authority to exercise emergency "powers" enabling them to call upon local, state, and national government ministries and civil services to aid in the event of a disease outbreak.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<ul style="list-style-type: none"> • Directorate of Veterinary Services • Directorate of Livestock and Fisheries Extension • Directorate of Livestock and Fisheries Research Development • International consultants with extensive background in veterinary medicine and livestock disease emergency response systems (provided by donor agencies) • State government agricultural offices • Local government agricultural offices • UN Agencies like (i.e. FAO) • NGOs delivering vet. services in the states, counties, and bomas.
(2) Description of beneficiaries within the framework of the project:	<p>Primary beneficiaries are all stakeholders and other entities associated with the livestock and poultry industries. Indeed it can be said that secondary beneficiaries are every citizen of South Sudan would be a beneficiary of a program that prevents devastating livestock and poultry disease outbreaks.</p>

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<p>The livelihoods of thousands of South Sudanese livestock and poultry producers will be secured due to emergency disease outbreak plans being implemented. Food will be available, improving nutrition in terms of milk for children. Income for pastoralists from sale of animals and their products.</p>
(2) EIRR and/or FIRR, and/or	(if applicable)

Items	Information					
other economic analysis:						
2.5 Environmental and social impact, and mitigation measures						
(1) Expected level of negative or positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: d Positive: a</td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: d Positive: a	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society			
Negative: d Positive: a	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society					
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<table border="1"> <tr> <td>(Negative)</td> <td> <ul style="list-style-type: none"> Negative impact on the environment. If a disease outbreak does occur there will be a negative impact on the environment and society. Livestock and poultry in the thousands could die or be eradicated and there are disease and poultry diseases that can affect humans, referred to as zoonotic diseases </td> </tr> </table>	(Negative)	<ul style="list-style-type: none"> Negative impact on the environment. If a disease outbreak does occur there will be a negative impact on the environment and society. Livestock and poultry in the thousands could die or be eradicated and there are disease and poultry diseases that can affect humans, referred to as zoonotic diseases 			
(Negative)	<ul style="list-style-type: none"> Negative impact on the environment. If a disease outbreak does occur there will be a negative impact on the environment and society. Livestock and poultry in the thousands could die or be eradicated and there are disease and poultry diseases that can affect humans, referred to as zoonotic diseases 					
2.6 Monitoring and evaluation for impact measurement						
(1) Measurable indicators and situation at a starting point:	There is limited operational emergency response plan for livestock disease outbreaks. Due to lack of a budget to address disease outbreaks, FAO provides support through the Directorate of Veterinary Services.					
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> Published written generic and disease specific emergency response plans to livestock disease outbreaks. Agencies and NGOs report disease outbreaks to states. FAO supports with Vaccines through the Directorate of Veterinary Services. Annual simulations held based on written contingency plans. Legislation passed giving Directorate of Veterinary services emergency powers and funding in case of an outbreak. 					
(3) Methods of measurement and sources of information:	Directorate of Veterinary Services ensuring a secure database is updated with livestock disease information for the country. Annual state meetings held to inform and educate the public. Annual livestock coordination meetings held to share information about NGOs/Agencies areas of operation, disease outbreaks, treatments done, number of CAHWs.					
(4) Responsible parties for the monitoring and evaluation:	Directorate of Veterinary Services; Directorate of Livestock and Fisheries Extension; Directorate of Livestock and Fisheries Research Development					
2.7 Required human resources						
(1) Principle of human resources management:	The amount of human resources needed during a disease outbreak is hard to quantify. The number of people involved could be in the hundreds for the whole country. The team for disease outbreak investigation is usually composed of national staff from the Departments of Epidemiology and Disease Control and from the state where the outbreak has occurred. In maintaining written contingency plans and holding public educational meetings in each state, staff from the Directorate of Veterinary Services will be required. International consultants with extensive backgrounds in veterinary medicine and emergency outbreak protocols (provided by donor agencies) will be needed to assist the Directorate of Veterinary Services in writing plans and coordinating simulations in the beginning phases of this project. An emergency response team from within the Directorate of Veterinary Services will need to be appointed to take the lead for this project.					
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> 1- Director of Emergency response together with a team (at least 5 people) from Directorate of Veterinary Services, Departments of Epidemiology/Disease control/wildlife (in case the disease is associated with wild animals). 3- Senior level veterinarians from Directorate of Veterinary Services to serve on the emergency response team. 3- Senior level livestock specialists from the Directorate of Animal Production and Range Management. 10- Senior level state CAHWs to serve on the team (in the state where the outbreak has occurred). 1- Mid level administrative staff. 					
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<ul style="list-style-type: none"> 2- International consultants (veterinarians) with experience in emergency disease outbreak protocols. 1 year assignment for each consultant. 					
2.8 Risk assessment with respect to project objectives and resources to be applied						
(1) Expected level of risk:	<table border="1"> <tr> <td>H</td> <td>L: Low</td> <td>M: Medium</td> <td>H: High</td> <td>(select an indicator from the list)</td> </tr> </table>	H	L: Low	M: Medium	H: High	(select an indicator from the list)
H	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	The risk is high. The government must be committed to providing annual emergency funding to the Directorate of Veterinary Services. Furthermore, civil service agencies must be committed to coming to the aid of the Directorate during annual simulations and actual emergency disease outbreaks.					
2.9 Other special considerations and/or notes						
(1) Other special considerations and/or notes:	This project is of high priority for the livestock and poultry industries.					
2.10 Routine operation and required resources after the completion of the project						

Items	Information
<p>(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.</p>	<p>Human resources on-going costs (some of these costs could be absorbed by utilizing already existing staff with the below mentioned government agencies):</p> <ul style="list-style-type: none"> • 1- Director of emergency response team from with Directorate of Veterinary Services. • 3- Senior level veterinarians from Directorate of Veterinary Services to serve on the emergency response team. • 3- Senior level livestock specialists from the Directorate of Animal Production and Range Management. • 10- Senior level state CAHWs to serve on the team (from the State where the outbreak has occurred). • 1- Mid level administrative staff. <p>Other on-going expenses:</p> <ul style="list-style-type: none"> • Annual budget allocated to the Directorate of Veterinary Services for emergency outbreak aid. This budget should allow for extra funds being available to fund extra work required from police and military if needed. • Computer equipment. • Transportation allowances (at least 5 vehicles reserved for emergency response team and fuel allowance). • Annual budget needed to conduct public meetings (1 in each state). 10 meetings total annually with an unknown amount of the public attending. • Annual livestock coordination meetings held to share information about NGOs/Agencies areas of operation, disease outbreaks, treatments done, number of CAHWs. This would be an annual 3 day conference held in Juba with approximately 50 people attending. • Communication allowance (cell phones and reliable internet service).

3.4.10 Veterinary services delivery project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Livestock		
(2) Project name:	Veterinary services delivery project		
(3) Project ID:	0 2 1 0 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2020/21	Ending FY: 2024/25	Duration (years): 5
(5) Total investment:	SSP 84,167,000	USD 21,042,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		LS.SA5	Animal health and disease control services	Table 2-3
(2) Government organisation:	07	MLFI-VS	Directorate of Veterinary Services	Table 2-6
	08	MLFI-EX	Directorate of Livestock and Fisheries Extension	Table 2-6
(3) Activity types:	104	ID-IM	Institutional development- Implementation and monitoring	Table 2-12
	203	SP-EX	Service delivery and infrastructure development- Extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	X
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

South Sudan has a large livestock population, although the actual number of large and small ruminants has not been determined through a census. However, the population is estimated at 11 million cattle, 12 million goats, and 12 million sheep. There are several diseases identified by the World Organization for Animal Health (OIE) that are considered important to national and global public health. Most recently South Sudan has been recognized by OIE and is responsible for developing a plan to address these diseases and to comply with international animal health standards.

Currently the animal health sector is serviced by public agencies, NGO's, and private sector service providers. However, the services are inadequate, quality/competency of some veterinarians or paraprofessionals is questionable, and overall veterinary service needs are not being met nationally. Moreover, NGOs are providing services including training of Community Animal Health Workers (CAHWs), but the training differs widely between the twenty-eight organizations providing training.

South Sudan has limited ongoing disease monitoring and control programs due to poor funding. The country does participate in the Pan African Tsetse and Trypanosomosis Eradication Campaign (PATTEC). It has a strategy with the Bill and Melinda Gates foundation to address Pest de petits ruminants (PPR) and a regional Foot and Mouth Disease (FMD) control project. However, these efforts are largely academic and little progress has taken place in the implementation of the programs or delivery of results.

In 2012, MLFI recorded less than one million vaccinations across South Sudan which is estimated to have more than thirty million large and small ruminants; this can be described as a number too small to prevent and protect the overall population of ruminants. The effective delivery of animal health services is essential for disease control and efficient production. Currently the accessibility of the livestock and poultry industry to consistent and certified animal health services is limited in South Sudan.

For South Sudan to enter the world market for livestock and livestock products and meet OIE obligations a system must be developed to provide animal health services to all parts of South Sudan in a cost effective manner. Moreover, given the current regulations, vaccines are controlled by the government. Some drugs are provided to the states by the government and in the market by private sectors. As with most developing countries, animal health services have been provided by the government but with civil strife and the gain of independence from Sudan there is no clear plan in place for the delivery of services. It is proposed that the national livestock extension service (project outlined within the CAMP project framework) in partnership with existing CAHW workers can become an important temporary part of the solution to the delivery of animal health services to all regions of South Sudan. It is important to note that the government or state cannot afford to provide these direct animal health services indefinitely. A clear plan to phase out some of the government funded health services through the extension service to a network of private veterinarian practices should be developed.

(2) Objectives:

To develop a functional veterinary services program with a national disease vaccination and monitoring plan that addresses animal health and extension services at the local level utilizing livestock extension specialists in partnership with the Directorate of Veterinary Services. The Directorate of Veterinary services will provide important animal health delivery services in the beginning of this project with the goal of strengthening private sector veterinarian practitioners and clinics.

(3) Overall description including temporal and spatial extent of project:

The primary purposes of this project will address veterinary services for livestock producers; address the needs for intensive disease control; harmonize with other animal health entities in the public sector; and define on-going government services for animal health. To address current gaps in veterinary services, livestock extension workers and other veterinary para-professionals will be utilized. Additional assistance from kraal leaders (cattle camp leaders), harvest facilities, butchery workers, local officials and others will be used in disease detection. To help close the gap on the quality of veterinarian service being delivered in South Sudan, donor agencies in partnership with the South Sudanese government would send students, faculty, and government veterinarians abroad to receive either full veterinarian certifications or intensive training.

Overall the project is to develop a plan for animal health services to be delivered through a national and state extension system while working to develop a transition plan in which animal health services (surgery, consistent herd vaccination and health plans, and treatment of livestock infirmities/diseases) are provided by the private sector on a fee basis. The public sector after the transition will focus on the control of epidemic diseases through the use of sanitary mandates, quarantine services, movement controls,

Items	Information
(4) Component structure:	<p>compulsory slaughter, disease surveillance, and vaccination/vector control. Other public sector responsibilities will include some types of research and extension, drug quality control, food hygiene inspection, animal diagnostic laboratories, and registration of private veterinary clinics. Moreover the government will focus on creating an enabling environment for the private sector through use of credit, sanitary mandates and legislative reform that reduces barriers of private supply and facilitates the formation of collective action groups. It is noted that this represents a change from the past in which the government shifts responsibility to the private sector. MLFI will recognize certified extension workers as a partial solution of effectively delivering animal health services to the industry while monitoring and assisting in disease monitoring and reporting.</p> <p>Component 1: Education opportunities Component 2: Training Component 3: Vaccination campaign Component 5: Government veterinary services</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs	<p>Component 1: Education</p> <p>Activity 1.1: The South Sudanese government in partnership with donor agencies will choose 10 recent Animal Science college graduates from a university within South Sudan and provide scholarships to attend veterinarian schools in suitable countries [United States, Canada, Australia, New Zealand, United Kingdom, Germany, France, Finland]. Selection criteria includes:</p> <ul style="list-style-type: none"> Academic excellence Residence with South Sudan (students should be chosen from different regions of South Sudan instead of just one area). Gender with equality between females and males. Commitment to return to their country and provide services. <p>Output: 10 students will be sent abroad and provided full scholarships to attend veterinary schools within the United States or Europe. Average cost of full scholarships including room and board for each student and living stipends (4 years) would be \$250,000 each. Total= \$2.5 million. These students would return to South Sudan and provide the foundation of a modern, functional, internationally accredited veterinary services delivery program.</p> <p>Activity 1.2: The South Sudanese government in partnership with donor agencies will choose 3 government veterinarians and 5 veterinary faculty from veterinary school/colleges in South Sudan. These 8 individuals would be sent for 6 months of intensive training at veterinary college in the United States or Europe. Training would include modern surgical techniques, update on medicines, vaccination campaign management, and animal diagnostic training.</p> <p>Output: These 8 individuals would spend 6 months abroad in an intensive training program. Partnerships with veterinary colleges within the United States or Europe would be sought with the help of FAO. Total cost for all individuals for training fees, travel, and living expenses for the 6 months would be approximately \$325,000. With this training government staff and faculty would return to South Sudan with an updated and modern view on veterinarian medicine and delivery. The cost of sending these individuals for training would be easily recouped through the millions of dollars saved by preventing ruminant diseases due to their training.</p> <p>Component 2: Training</p> <p>Activity 2.1: Government veterinarians returning from training abroad along with 2 international consultants will provide 30 days of training to all government veterinarians, livestock extension workers, and CAHW workers temporarily employed by the government for services. Training would include areas of vaccination campaign management, disease monitoring and emergency preparedness, inspection methods for harvest and meat processing facilities and updates on surgical methods for large and small ruminant livestock.</p> <p>Outputs: 3 government veterinarians and 2 international consultants (consultants will be working on a 1 year assignment) will create curriculum for 150 people (90 permanent government workers and 60 temporary workers) to receive 30 days of training in Juba.</p> <p>Component 3: Vaccination campaign</p> <p>Activity 3.1: Directorate of Veterinary Services with help from OIE will identify priority diseases that should be targeted for vaccination campaigns.</p> <p>Outputs: The 150 people that attended the 30 day training in Juba will be asked to complete a 6 month vaccination campaign across South Sudan. Those people that are already government employed will be expected to provide assistance to this campaign as part of their job. Those that aren't regular government employees (approximately 60 people) would be hired as temporary workers for the 6 month campaign. The campaign would be done 5 days a week for 6 months. 10 teams (15</p>
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Items	Information
	<p>people per team) would be divided up for each state to complete the campaign.</p> <p>Activity 3.2: Procure or import quality vaccines Outputs: For the vaccination campaign, high quality, not expired vaccines should be imported by the Directorate of Veterinary Services. It is estimated that vaccination combinations for 30 million head of livestock should be purchased. The average cost of vaccination combination is .10 cents per head. This would be a total cost of \$3 million annually. This amount should be budgeted annually in the MILF budget for only 5 years with private livestock producers then being expected to pay for the vaccines/service either through the government or private veterinarians.</p> <p>Component 4: Government services Activity 5.1 Transition of CAHW and other public veterinarian services to the private sector with the government providing some on-going services. Outputs: The primary goal should be for most of the veterinary services to be provided by the private sector with the government providing assistance through government inspectors, livestock extension workers, disease monitoring and eradication, setting policy for disease control, animal diagnostic laboratories, and registration of private veterinary clinics. Issues such as veterinarian inspection in harvest facilities, livestock extension workers, and sanitation inspectors are covered in other CAMP Project Profiles. Within this project framework it is noted that each harvest facility will have veterinarian inspectors, each state will have sanitation/health inspectors for meat processing facilities, and each state will have livestock extension workers. Directorate of Veterinary Services will maintain staff at the national and state level to monitor diseases, provide emergency response procedures, educate the public, procure vaccines, staff animal diagnostic laboratories, and develop partnerships with international animal health organizations. Total employees being maintained by the government that can provide services within the framework of this project will be approximately 846 employees. The breakdown would be: Animal diagnostic laboratories/border crossing/quarantine staff: 440 Disease surveillance/disease database management staff: 15 Livestock extension workers including county CAHW staff: 323 Livestock harvest facility and sanitation inspectors: 58 National Directorate of Veterinary Services staff (administration of national and state programs): 10</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<p>International animal health and veterinarian experts, training specialists that understand animal health issues and can put it all into terms easily understood by community workers and assistants, OIE experts, and other regional animal health experts. Public sector service providers would be the following:</p> <ul style="list-style-type: none"> • Animal diagnostic laboratories/border crossing/quarantine staff • Disease surveillance/disease database management staff • Livestock extension workers including county CAHW staff • Livestock harvest facility and sanitation inspectors • National Directorate of Veterinary Services staff (administration of national and state programs)
(2) Description of beneficiaries within the framework of the project:	<p>All animal health workers, veterinary staff and local animal service providers would be the primary beneficiaries. All livestock producers and consumers will be the secondary beneficiaries. Regional countries will benefit with harmonized systems.</p>

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<p>A dynamic and functional veterinary services system that utilizes professionals, para-professionals and local skilled leaders to assist in the delivery of vaccination programs, a real time monitoring and disease tracking mechanism and animal health and extension services.</p>
(2) EIRR and/or FIRR, and/or other economic analysis:	<p>(if applicable)</p>

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative or positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Positive: d Negative: d</td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Positive: d Negative: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Positive: d Negative: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Positive)</p> <ul style="list-style-type: none"> • A proper veterinary services system will recognize livestock diseases quickly and have them eradicated before they can spread to wildlife and humans. This will help animals and humans live in a safe environment. <p>(Negative)</p> <ul style="list-style-type: none"> • If there is poor oversight from the Directorate of Veterinary Services then a livestock 		

Items	Information
	disease outbreak could result in diseases being transferred to humans (zoonotic) as well as livestock dying in the thousands and carcasses polluting the environment.
2.6 Monitoring and evaluation for impact measurement	
(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • Number of animal health providers • Number of certified CAHWs • Number of harmonized animal health programs • No certified and accepted animal health emergency program • Record of animals vaccinated • No certified vaccination policy
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • Number of animal health providers • Number of certified CAHWs • Number of harmonized animal health programs • Certified and accepted animal health emergency program • Number of vaccinated livestock • Certified vaccination policy
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> • Number of units of vaccines used • Signed records of animals vaccinated including vaccination team and owner • Recorded emergency plans with signatures from local staff
(4) Responsible parties for the monitoring and evaluation:	Directorate of Veterinary Services; Directorate of Livestock and Fisheries Extension
2.7 Required human resources	
(1) Principle of human resources management:	Capacity building at all levels including at the national level.
(2) Required human resources in the public sector (Positions, grades and numbers):	<p>Staffing for other CAMP projects pertaining to animal health are covered in those specific project profiles. For this specific project the staffing would be more on an administrative level. Those staff would include:</p> <ul style="list-style-type: none"> • 1- Director General for Directorate of Veterinary Services • 5- Deputy Directors (1 for disease surveillance and control, 1 for animal diagnostic laboratories, 1 for licensing private veterinary clinics, 1 for vaccination campaign program, and 1 for government inspection program. • 15- Senior level veterinarian officers (national level) • 10- Mid level veterinarian officers (1 for each state) • 5- Mid level administrative staff
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<ul style="list-style-type: none"> • 1- International consultant (veterinarian with training and curriculum development experience). 1 year assignment.
2.8 Risk assessment with respect to project objectives and resources to be applied	
(1) Expected level of risk:	H L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	This risk is high because of workers dealing with livestock diseases that could be contagious to humans. Also the complexity of the project involving many stakeholders makes this a high risk project as far as being functional and successful.
2.9 Other special considerations and/or notes	
(1) Other special considerations and/or notes:	The system depends on collaboration between public and private stakeholders. Some of the public sector actors will be transferred to the private sector and will not be part of the public system. It will require the system to undergo re-evaluation every five years to adjust for needs and changes in priorities.
2.10 Routine operation and required resources after the completion of the project	
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>Human resources (on-going):</p> <ul style="list-style-type: none"> • 1- Director General for Directorate of Veterinary Services • 5- Deputy Directors (1 for disease surveillance and control, 1 for animal diagnostic laboratories, 1 for licensing private veterinary clinics, 1 for vaccination campaign program, and 1 for government inspection program. • 15- Senior level veterinarian officers (national level) • 10- Mid level veterinarian officers (1 for each state) • 5- Mid level administrative staff <p>Other on-going costs:</p> <ul style="list-style-type: none"> • Communication allowances (cell phone and internet) • Office supplies and maintenance • Transportation allowances

Part 3: Project cost estimation

Project duration	SSP/USD = 4																											
	Phase 1			Phase 2			Phase 3			Phase 4			Total															
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000	% to total	
02.10 Veterinary services delivery project																												
Cost group																												
1 Management and operation of project																												
1 Deployment of government staff																												
2 Procurement of administrative services (contracted)																												
1 Temporary workers for vaccination campaign																												
3 Procurement of professional services (contracted)																												
1 International consultant (veterinarian)																												
4 Implementation of staff training																												
1 Education of 10 graduates for 4 years (abroad)(per diem)																												
2 Education of 10 graduates for 4 years (abroad)(transportation)																												
3 Education of 10 graduates for 4 years (abroad)(tuitions)																												
4 Trading of 8 staffs for 6 months (abroad) (per diem)																												
5 Trading of 8 staffs for 6 months (abroad) (transportation)																												
6 Trading of 8 staffs for 6 months (abroad) (tuitions)																												
7 30-day training in Juba (per diem)																												
8 30-day training in Juba (transportation)																												
5 Implementation of research, studies and surveys																												
6 Delivery of extension and training services to the private sector																												
7 Operation and maintenance																												
1 Fuels for vaccination campaign																												
2 Construction of infrastructure and procurement of equipment																												
1 Construction of office buildings																												
2 Construction of research, training and other specialized buildings																												
3 Construction of feeder roads																												
4 Construction of production, market and transportation facilities																												
5 Acquisition of land																												
6 Procurement of vehicles																												
7 Procurement of equipment																												
3 Subsidies, equity and loans																												
1 Provision of cash and/or in-kind subsidies																												
1 Vaccine for campaign																												
2 Provision of training services to the private sector																												
3 Equity investments																												
4 Provision of loans																												
5 Social assistance/donation (Emergency)																												
Total (SSP '000)																												
Total (USD '000)																												
% to total																												

Public sector project
Routine work by government

Private sector project
Routine work by private sector

3.4.11 Beekeeping extension project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Livestock		
(2) Project name:	Beekeeping extension project		
(3) Project ID:	0 2 1 1 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2018/19	Ending FY: 2024/25	Duration (years): 7
(5) Total investment:	SSP 3,207,000	USD 802,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		LS.SA6	Livestock production and processing enhancement	Table 2-3
(2) Government organisation:	05	MLFI-AP	Directorate of Animal Production and Range Management	Table 2-6
	07:08	MLFI-VS;EX	Directorate of Veterinary Services; Directorate of Livestock and Fisheries Extension	Table 2-6
(3) Activity types:	301	PS-PR	Private Sector-Production	Table 2-12
	203	SP-EX	SD/ID Extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	X
	06	PS	Private sector project	X
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	X
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>Based on the policy and strategic plan of the Ministry of Animal Resources and Fisheries pages 4 and 9 for 2010, responsibility for bees is shifting from the Ministry of Agriculture to the Ministry of Animal Resources and Fisheries for the following reasons:</p> <ul style="list-style-type: none"> • reference to classification of bees are under animal kingdom. • bees are considered a food safety concern. • control of bee diseases is under veterinary services. <p>In general, honey is used in households as a preferred sweetener in beverages, second only to sugar and is consumed in raw form as honey comb and as medicine. It is also used for brewing liquor and wine. Beeswax is used in the manufacture of cosmetics, candles, foundation sheets for hives, and medicines.</p> <p>The key challenges for the honey value chain in South Sudan includes:</p> <ul style="list-style-type: none"> • limited business and apiary management skills of producers; • inability to deal with risks brought about by weather variability; • theft of hives; • low adoption rates of technology; • unreliable/low volume of honey supplied; • poor quality honey supplied; • inadequate technologies and packaging materials; • extension training; • lack of policy and strategy; • inadequate access to financial services <p>Honey production is a common livelihood activity in South Sudan and in some locations it has social-cultural roles. Beekeeping is an important livelihood option for vulnerable communities: women's groups, including those from female headed households, are benefitting from income from the sale of honey; and returnees, for whom beekeeping is one of the three most important livelihood options, such as in Western Bahr el Ghazal State. For some tribes such as the Jurbel in Wulu County, Lakes State and the Bongo in Warrap State, honey plays important socio-cultural roles related to marriage and kinship ties. A survey by MLFI estimated production levels at 100,000 metric tonnes, however, this appears to be greatly over estimated when compared to official data from Ethiopia which ranks tenth globally in honey production at 43,000 metric tonnes. Moreover there is great apiculture potential due to accessible resources such as land, forests and water. Furthermore, rural communities are ready to organize themselves in cooperative groups and regional and international markets are available.</p> <p>Traditional bee workers gather honey and beeswax from forest areas and on average only gather approximately 420kg annually. Honey producers are producing below potential using rudimentary, traditional methods such as gathering wild honey in the forests. In contrast, the adoption of modern bee keeping and harvesting techniques (such as construction of hives that can be moved easily and accessed easily) can result in 30 to 45 kg per hive. Similarly, processors are processing below capacity due to inadequate volumes supplied by the farmers.</p>
(2) Objectives:	<p>The objective of this project is to educate and train existing producers and those that are interested in getting into the beekeeping business about honey production as a business and livelihood activity</p>
(3) Overall description including temporal and spatial extent of project:	<p>The primary goal of the beekeeping industry project is to organize, educate and assist the private sector in the adoption of modern beekeeping methods to increase the production of honey and bee products for human consumption while contributing to the livelihoods of rural South Sudanese citizens. It is important to note that apiary demonstrations should be a permanent part of the demonstration farms (outlined in a separate CAMP project profile) as well as be part of the demonstration farm annual field day. Beekeeping provides excellent linkages to the crop and forestry industries. Hives can be housed on cropland and in the forests in order to help pollination of plants which in turn will produce honey in the hives.</p>
(4) Component structure:	<p>Component 1: Association and cooperatives development Component 2: Training Component 3: Business Facilitation Component 4: Linkages with service providers</p>
2.2 Detailed description of project component, activity and outputs	
(1) Component, activity and outputs:	<p>Component 1: Association and cooperatives development Activity 1.1: Organize into interest groups and establish sustainable associations and cooperatives. Activity Assess the industry R</p>

Items	Information
	<p>Outputs for Activities 1.1 and 1.2: Reviewed and published bee industry assessment. 3 bee industry production/business specialists (1 international and 2 national) will be based in Juba and for 6 months will organize interest groups associated with the bee industry, work with these interest groups to form cooperatives, and with help from these cooperatives complete an industry assessment that is published and readily available to the public.</p> <p>Component 2: Training Activity 2.1: Provide training on basic, intermediate, and advanced bee keeping, hive design, business management, procuring credit, and marketing. Outputs: Training for beekeepers and cooperatives will be provided to at least 200 beekeepers for a period of 6 days in Juba. The trainers will be a partnership between 3- bee industry production/business specialists (1 international and 2 national) and 3- bee disease specialists (1 international and 2 national).</p> <p>Component 3: Business Facilitation Activity 3.1: Development of Small Medium Enterprises (SME). Activity 3.2 Establish collection centres Activity 3.3 Develop grades and standards, including CODEX, US, Japan, EU. Activity 3.4 Establish packaging requirements Outputs for Activities 3.1-3.4: 10 specialists (4 international and 6 national) will provide 1 year of technical assistance to beekeepers and beekeeping cooperatives throughout South Sudan. Specialists will travel to counties, regions, and states throughout the 1 year period providing training to cooperatives throughout the country. It is difficult to quantify total numbers of producers that will be trained but minimum of 576 members from potentially 18 cooperatives (32 from each cooperative) in the 1 year period is estimated. 10 specialists would be expected to provide at least 3 days of training per week for approximately 30 weeks (90 trainings) in each of the 79 counties in South Sudan (79 county trainings with 11 additional trainings being scheduled as needed).</p> <p>Component 4: Linkages with service providers Activity 4.1: Develop linkages with bee industry owners and service providers (input stores) including international linkages. Outputs: 208 government (20 state livestock extension workers and 188 county livestock extension workers) staff will provide technical assistance and linkages between beekeeper individuals/cooperatives and service providers (including internationally). This will be done by government staff as part of their job each year.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	Service providers need to be industry specialists that have direct experience with the industry and a proven track record in developing bee industries. The specialists will assist the national staff on developing training modules and training of the trainers. Specialists in business activities are needed and individuals with experience in establishing international standards for the industry. The associations can benefit from other association development plans and projects in place. An experienced assessment team will be needed for the assessment.
(2) Description of beneficiaries within the framework of the project:	Rural populations as well as women, youth, and disabled soldiers are the primary beneficiaries. This activity can be an important gender activity as well as for households with limited land holdings. Secondary beneficiaries are Small Medium Enterprises (SME) providers of various business services (finance credit, loans, hives, equipment, packaging, etc.) Additionally communities will benefit since it will lead to food security and income stability. Expansion of the industry into regions of crop production exists.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	A sustainable and profitable bee industry that creates jobs and generates revenue while addressing rural livelihoods and reduction of poverty.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right)	<table border="1"> <tr> <td>Negative: a Positive: d</td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: a Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: a Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation	(Negative) • There is minimal negative impact and that only comes from improper harvesting methods in the forest where trees could be killed.		

Items	Information
measures:	(Positive) <ul style="list-style-type: none"> • Bees have a critical positive impact on the environment as pollination is essential to most plants. The project has the potential to greatly increase the income in rural areas which can lead to food security, increased cash flows for school fees and great job opportunities for youth, women, and disabled soldiers.

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • Registered number of bee industry associations. • Number of people in associations. • Number of members in interest groups. • Number of business organizations offering services to the bee industry.
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • Registered bee industry association. • Number of association members. • Number of members in interest groups. • Number of organizations offering services to the bee industry.
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> • Registered associations with appropriate government agency. • Meeting attendance sheets. • Number of business licenses.
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> • Directorate of Animal Production and Range Management; Directorate of Veterinary Services; Directorate of Livestock and Fisheries Extension

2.7 Required human resources

(1) Principle of human resources management:	<ul style="list-style-type: none"> • Capacity development throughout the value chain. • Opportunities in business participation.
(2) Required human resources in the public sector (Positions, grades and numbers):	<p>Human resources:</p> <ul style="list-style-type: none"> • 3- senior grade administrators (national level) • 10-midgrade administrators(state level) one per state • 5-mid-grade administrative staff(national level) • 5- junior grade administrators (national level) • 20 (2 for each state)- livestock officers • 188 CAHW/county extension livestock workers (handle livestock and bee responsibilities (2 for each county) <p>Other resources:</p> <ul style="list-style-type: none"> • Cost of maintaining apiary (equipment) • Cost of establishing the apiary demonstration farms • Communication allowances (cell-phones and internet services) • Office maintenance • Record keeping costs
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<ul style="list-style-type: none"> • 3- Bee industry production/business specialists (1 international and 2 national) • 3- Bee disease specialists (1 international and 2 national) • 2-Bee industry grades and standard specialists (1 international and 1 national) • 2-Packaging specialists (1 international and 1 national) • All specialists will complete a 1 year assignment.

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	M L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	The risk assessment is medium due to the scope of the program. It is a straight forward program but at later stages the program will engage several service providers and develop various linkages. In other words, risk will increase over time due to the complexity and size of the program.

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	This is primarily a private sector program with the need for the public sector to focus on the business enabling environment and protection of natural forests. It is recommended that an NGO with regional experience be involved.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>The grades and standards development and assignment is a public sector function. This has to be transparent. Association and business registration is a government function. There will be on-going assistance at the state level and county level from government livestock officers. The rest remains under the private sector.</p> <ul style="list-style-type: none"> • 3- senior grade administrators (national level) • 10-midgrade administrators(state level) one per state • 5-mid-grade administrative staff(national level) • 5- junior grade administrators (national level) • 20 (2 for each state)- livestock officers • 188 CAHW/county extension livestock workers (handle livestock and bee responsibilities (2 for each county) • Communication allowances (cell-phones and internet services) • Office maintenance • Transportation allowance for state and county government officers
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Part 3: Project cost estimation

Project duration	SSP/USD = 4																												
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	Total	% to total		
02.11 Beekeeping extension project																													
Cost group																													
1 Management and operation of project																													
1 Deployment of government staff				1,350	1,350	1	1	1	1	1	1																2,703	676 84%	
2 Procurement of administrative services (contracted)				1,350	1,350																						2,700	675 84%	
3 Procurement of professional services (contracted)				240	240																						480	120 15%	
1 International expert (bee industry production/business)				180	180																						360	90 11%	
2 Local expert (bee industry production/business)				210	210																						420	105 13%	
3 International expert (disease)				180	180																						360	90 11%	
4 Local expert (disease)				210	210																						420	105 13%	
5 International expert (grades and standard)				90	90																						180	45 6%	
6 Local expert (grades and standard)				150	150																						300	75 9%	
7 International expert (package)				90	90																						180	45 6%	
8 Local expert (package)																													
4 Implementation of staff training																													
5 Implementation of research, studies and surveys																													
6 Delivery of extension and training services to the private sector																													
7 Operation and maintenance																													
1 Supplies and consumables for monitoring						1	1	1	1	1	1																3	1 0%	
2 Construction of infrastructure and procurement of equipment																													
1 Construction of office buildings																													
2 Construction of research, training and other specialized buildings																													
3 Construction of feeder roads																													
4 Construction of production, market and transportation facilities																													
5 Acquisition of land																													
6 Procurement of vehicles																													
7 Procurement of equipment				504																							504	126 16%	
3 Subsidies, equity and loans																													
1 Provision of cash and/or in-kind subsidies																													
2 Provision of training services to the private sector				504																							504	126 16%	
1 Beekeepers and cooperatives training at Juba (per diem)				324																							324	81 10%	
2 Beekeepers and cooperatives training at Juba (transportation)				180																							180	45 6%	
3 Equity investments																													
4 Provision of loans																													
5 Social assistance/donation (Emergency)				1,854	1,350	1	1	1	1	1	1																3,207	100%	
Total (SSP '000)				464	338	0	0	0	0	0	0																802		
Total (USD '000)				58%	42%	0%	0%	0%	0%	0%	0%																100%		
% to total																													

Public sector project
Routine work by government
Private sector project
Routine work by private sector

3.4.12 Dairy production and processing extension project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Livestock		
(2) Project name:	Dairy production and processing extension project		
(3) Project ID:	0 2 . 1 2 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2020/21	Ending FY: 2029/30	Duration (years): 10
(5) Total investment:	SSP 3,505,000	USD 876,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		LS.SA6	Livestock production and processing enhancement	Table 2-3
(2) Government organisation:	05	MLFI-AP	Directorate of Animal Production and Range Management	Table 2-6
	08	MLFI-EX	Directorate of Livestock and Fisheries Extension	Table 2-6
(3) Activity types:	203	SP-EX	Service delivery and infrastructure development- Extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	X
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	X
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income		

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>The dairy industry and milk value chain in South Sudan can be described as rudimentary. There are a variety of products available ranging from fresh milk to powdered products. Fresh milk produced from local indigenous breeds is either sold as fresh or sour, where the sour milk is fermented to increase shelf-life. Powder milk is imported through key importers and sold throughout urban markets with heavy use in locations where cattle populations are relatively limited. The industry lacks organization with no formal policy or direction. Additional problems include poor management, concentration in urban areas with limited management considerations, limited disease management, poor sanitation, poor collection, lack of processing and transport, and lack of access to inputs and financing. Moreover, current dairy programs implemented by various organizations only meet some of the industry requirements. Consumption of milk and milk products continues to increase and milk based products are important nutritionally.</p> <p>On average the indigenous breeds produce 0.5–1 litre per day per lactating cow, which is extremely low. There are some indigenous breeds, such as in the Kenana and Botana area, that are said to be high milk producers. Generally traditional milking and handling practices with low hygiene standards are used. Some NGO's in Malakal, Upper Nile State are building the capacity of women, who do most of the milking, to improve their milk hygiene practices so that their milk can enter the local market. Close to 90% of the milk produced is consumed within households, only 10% is offered for sale. The powder milk segment is predominated by milk producers and processors in Sudan, Uganda, Kenya and the Middle East and North Africa (MENA) region, especially the United Arab Emirates and Egypt.</p> <p>High milk demand, but also a large gap between current per capita consumption levels and recommended levels, means there is a large and fast growing demand and therefore business opportunity. The major production and processing gaps can be closed with relatively low level technologies, promotion of milk hygiene and organization of the sector to give the sector an initial boost. Areas of high cattle populations are opportunities for the establishment of collection centres with installed cooling facilities.</p>
(2) Objectives:	<ul style="list-style-type: none"> • To organize dairy producers into interest groups and cooperatives, assess the industry, develop a comprehensive training program and develop strategically located milk collection centres. • A simple dairy production industry that is focused on producing for the local fresh market during the early phases with the potential to add simple value after the establishment of milk collection centres. • Following the establishment of milk collection centres, to reassess the industry and develop a long range strategy based on the status of the industry at that point in time.
(3) Overall description including temporal and spatial extent of project:	<p>The technical assistance project will focus on developing the necessary skills for a profitable and sustainable dairy industry. Technical training from livestock extension specialists will need to focus on women's groups since women are the ones that do the milking and care for the milk afterwards. The program will ensure gender equality and address all actors along the supply chain from production to consumption. It will focus on complete supply chain linkages and strengthening to ensure a functional system. Milk collection centres will be constructed along with milk cooling tanks installed to help with getting fresh milk into the local markets and providing income for the dairy families.</p>
(4) Component structure:	<p>Component 1: Assessment Component 2: Cooperative development Component 3: Technical training Component 4. Construction of milk collection centres</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1. Assessment</p> <p>Activity 1.1: A team led by MLFI officers will spend 6 months completing an in-depth assessment of the dairy industry in South Sudan. While completing the assessment they will gather data on interest groups.</p> <p>Outputs: Assessment will be written, published and distributed within 6 months (first 6 months of year 1 of project). The assessment team will consist of the following individuals:</p> <ul style="list-style-type: none"> 1- International consultant specializing in agricultural industry assessments. 2- MLFI Animal Production officers (dairy experience). 10- Livestock extension specialists (1 per state). <p>Data will be collected by assessment team traveling to each state 2 times with the rest of the work being completed in Juba.</p> <p>Component 2: Cooperative development</p> <p>Activity 2.1: Based on the findings of the assessment team concerning interest groups,</p>
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Items	Information
	<p>a second team led by MLFI Animal Production officers will form registered dairy producer cooperatives. After the cooperatives are formed, follow up visits will take place with each cooperative and training will take place.</p> <p>Outputs: At least 4 trips (3 cooperative development trips and 1 formal training trip) will be made to each state by the cooperative team (40 trips total). Follow up trainings will include:</p> <ul style="list-style-type: none"> 10 training sessions (1 session per state each lasting 3 days) on creating cooperative by-laws, financial management, business development and linkages, electing officers, etc. It is estimated that 50 people will attend each session for a total of 500 people. <p>The cooperative development team will consist of the following people:</p> <ul style="list-style-type: none"> 1- international consultant specializing in cooperative development. 2- MLFI Animal Production officers. 10- livestock extension specialists (1 per state). <p>This output will take 1 year to complete (second 12 months of the project consisting of second 6 months of year 1 and first 6 months of year 2).</p> <p>Component 3: Technical training</p> <p>Activity 3.1: A team of specialists led by MLFI Animal Production officers will provide extensive technical training to state livestock extension workers and county CAHW workers. Training subject areas will include cow and calf nutrition, feeds and feeding, milking procedures with emphasis on sanitary milking and milk handling procedures, basic milk processing and storage, animal health (vaccinations and mastitis control), budget/financial basics.</p> <p>Outputs: A 5 day training will take place in each of the 10 states (50 training days total) and will be given to 2 livestock extension workers (2 per state for a total 20 people) and county CAHW workers (2 per county for a total of 158 people). County CAHW workers will attend the training that is located in their state. The technical training will take place in the 2nd 6 months of the 2nd year of the project. These state and county workers would then be expected as part of their normal job duties to provide technical assistance to dairy farmers or potential dairy farmers.</p> <p>The technical training team will consist of the following individuals:</p> <ul style="list-style-type: none"> 1 international consultant (dairy specialist) 2 MLFI Livestock and Fisheries Extension officers <p>Component 4: Construction of milk collection centres</p> <p>Activity 4.1: MLFI Animal Production officers in partnership with state livestock extension specialists will identify 3 areas in South Sudan with the highest concentration of dairy cattle for the construction of milk collection centres. These milk collection centres will be constructed as examples of how milk collection centres and sites should be developed in the hopes that other areas of South Sudan will provide investment for construction. The site recommendation will include peri-urban locations where milk cows gather in the states of Central Equatoria, Eastern Equatoria, and Warrap. Sites will need to have access to reliable electricity in order to operate the milk cooling tanks. The CAMP Situation Analysis report (2013) states that these 3 states have the highest amount of local milk consumption. It is expected that a partnership between donor agencies and national/state governments will fund these collection centres and equipment.</p> <p>Outputs: Milk collection centres. Two separate transparent bidding processes will take place for construction of the collection centres and procurement of milk cooling tanks that will be stored in the centres.</p> <p>Construction costs: Each milk collection centre will be 93 square meters and will include a 3 sided shelter for milking, a small section for storing milking equipment, and a section for storing the milk cooling tank. The approximate cost per centre is: \$8,000 USD x 3= \$24,000.</p> <p>Milk cooling tank costs: A 240 litre milk cooling tank costs \$6,000 USD x 3=\$18,000</p> <p>Milking equipment and supplies (teat dip, mastitis medicine, sanitation supplies, stainless steel milking buckets, cleaning rags) costs: Total equipment per centre is \$1,000 x 3= \$3,000. One time funding will be provided for the milking equipment and supplies after which private producers will be responsible.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:

The training modules will be developed with the assistance of international technical specialists who will also assist in training of the trainers. The program is best implemented with a service provider with credible experience in dairy cow nutrition and milk production who understands the complete cycle of production and how to integrate into a profitable production system. National staff will accompany the specialists.

Consultants:

- 1 international assessment/survey consultant

Items	Information
(2) Description of beneficiaries within the framework of the project:	<ul style="list-style-type: none"> • 1 international cooperative development consultant • 1 international dairy production consultant Public sector: <ul style="list-style-type: none"> • 2 MLFI Animal Production officers • 2 MLFI Livestock and Extension officers • 20 state livestock extension workers • 158 county CAHW workers The primary beneficiaries are those interested in dairy production. Families (consumers) will benefit because of increased sanitary milk production for consumption. All participants in the value chain will benefit because of business linkages and profitable production.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	A small well trained and focused dairy industry that has the capacity to grow. There will be a small amount of high quality milk and milk products available for private consumption in the market place. The increased milk supply will lead to improved health and provide a source of livelihood which will include women. Milk collection centres will benefit dairy producing families by allowing a place for them to milk their cows, store their milk in a cooling tank, and then sell milk into the local market, thus generating income.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative or positive impact (select an indicator from the list in the right):	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	(Negative) <ul style="list-style-type: none"> • Will have a negative impact on the environment due to waste issues. There are best practices available from international books and on-line that address ways to control waste, odour, and water contamination. (Positive) <ul style="list-style-type: none"> • This dairy extension project represents excellent technical capacity building opportunities for rural development, women, and food security.

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • No known dairy interest groups, associations and cooperatives • Number of cows being milked • Amount of milk in market place • No current milk collection centres
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • Number of registered dairy interest groups, associations and cooperatives • Number of cows being milked • Amount of milk in market place • Number of milk collection centres
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> • Number of associations, interest groups and cooperatives registered with authorities • Training attendance sheets • Number of milk centres constructed • Annual reports provided by state livestock extension workers
(4) Responsible parties for the monitoring and evaluation:	Directorate of Animal Production and Range Management; Directorate of Livestock and Fisheries Extension

2.7 Required human resources

(1) Principle of human resources management:	<ul style="list-style-type: none"> • Capacity building of producers and supply chain actors • Sustainable businesses with increased production • Transformation of public sector to enablers
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> • 2 MLFI Animal Production officers • 2 MLFI National extension officers • 20 state livestock extension workers • 158 county CAHW workers
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<ul style="list-style-type: none"> • 1 international assessment/survey consultant. 6 month assignment. • 1 international cooperative development consultant. 6 month assignment. • 1 international dairy production consultant. 1 year assignment.

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	M L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	The risk level is assessed at medium. First the project is dependent upon a solid educational foundation. The training goals must be achieved for the project to develop properly. It also depends on access to resources cows and feed which is a risk. However, one mitigation method is to include goats. Another major risk is absence of electricity to

Items	Information
	operate milk cooling tanks.
2.9 Other special considerations and/or notes	
(1) Other special considerations and/or notes:	The project should be focused in technical assistance during the early stages. Developing countries tend to want to import improved dairy breeds of cattle. This should not happen until late into the project and even then should be approached cautiously. There are numerous examples of countries importing expensive dairy breeds from the United States and Europe to only see these breeds die quickly in a hot, tropical climate with no resistance to local diseases. The importation of milk powder is significant and should be considered when developing a long range strategy for the industry. Uganda approached production through this approach and within ten years became a low cost producer while Kenya introduced different breeds and the transformation of the industry was negatively affected. A strong education base will allow producers to find and adapt the system that best meets their needs and resources.
2.10 Routine operation and required resources after the completion of the project	
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>On-going human resources:</p> <ul style="list-style-type: none"> • 2 MLFI Animal Production officers • 2 MLFI National extension officers • 20 state livestock extension workers • 158 county CAHW workers <p>Other on-going expenses:</p> <ul style="list-style-type: none"> • Communication allowances (cell phone and internet) for each employee • Transportation allowances • Laptop computers

3.4.13 Development of feed mills project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Livestock		
(2) Project name:	Development of feed mills project		
(3) Project ID:	0 2 1 3 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2025/26	Ending FY: 2034/35	Duration (years): 10
(5) Total investment:	SSP 8,406,000	USD 2,102,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		LS	Private sector organisation and market enhancement	Table 2-3
(2) Government organisation:	07	MLFI-AP	Directorate of Animal Production and Range Management	Table 2-6
	04	MLFI-IM	Directorate of Investment Marketing and Supplies	Table 2-6
(3) Activity types:	301	PS-PR	Private sector production	Table 2-12
	209	SP-EI	SD/ID Economic infrastructure development	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	
	73	UT	Unity State	
	81	WA	Warrap State	
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	
	84	LK	Lakes State	
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	
	02	PH2	Phase II (2020/21-2024/25, 5 years)	
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	X
	06	PS	Private sector project	X
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	X
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>To fully develop the poultry, aquaculture and livestock value chains producers must have access to feed. Regardless of the production system followed by the producers there is still a need for feed manufacturers. More specifically, all ruminants require supplementary feed for optimum growth, even on high quality forages, and the requirement increases during dry or wet seasons. Moreover, poultry and aquaculture production is highly influenced by feed sources. Uganda lists one of its constraints to the livestock industry as the lack of commercial feed mills; in comparison to South Sudan there are several mills in Uganda manufacturing feed. Feed mills are part of the private sector and are business enterprises which generate profits. The public sector can assist the private sector by doing the following:</p> <ul style="list-style-type: none"> • enhancing the enabling environment such as development of roads; • elimination of taxes on inputs, importation laws and tariffs which benefit crop producers and manufactures; • consistent delivery of electricity, water and sanitation services; • elimination of informal taxes; • reduction in the time to obtain business licenses; • land tenure issues; • an environment that promotes and supports feed manufactures. <p>As discussed, feed mills are part of the private sector but technical assistance through government and donor agencies would greatly enhance the program.</p>
(2) Objectives:	A functional feed manufacturing industry.
(3) Overall description including temporal and spatial extent of project:	<p>The project is primarily a private sector led business and will develop firstly around the poultry industry then branch to the aquaculture industry next, with livestock grains/supplemental feed becoming popular as the industry expands. During the early stages of development feed can be shipped to several locations more cheaply than by investing in mills that would be working under capacity. Moreover, the mills need access to ingredients such as grains and by products. The feed manufacturing program will be divided into two components. First, an assessment of the industry and locations followed by an implementation component which should be supported with technical assistance from the public sector.</p> <p>Possible locations are areas with high production of cereal grains which are the major components of the feed mills industry inputs. There are already identified locations within the Zonal/National Effort for Agricultural Transformation (ZEAT/NEAT) Programs. These include:</p> <ul style="list-style-type: none"> • Yei (Central Equatorial State) which has the potential of maize grain production; • Renk (Upper Nile State) has the highest potential of sorghum grain production; • Aweil (Northern Bahr El-Ghazal State) with high potential of rice production; • Wau (Western Bahr El-Ghazal State) with high potential of groundnuts and sesame; • Yambio (Western Equatorial State) high potential for maize and other vegetables production <p>Feed mills provide excellent opportunities for linkages with the fisheries and crop industries. Feed mills will provide the type of feeds needed for fish such as pelleted and floating feeds. Crops provide the raw materials needed in formulation and milling of feed rations.</p>
(4) Component structure:	<p>Component 1: Feed industry value chain study Component 2: Feed mill development</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1: Feed industry value chain study Activity 1.1: Desk study and field assessment of the top locations from desk study. Outputs: 1 international assessment specialist with a background in agribusinesses will partner with 2 MLFI Agribusiness officers for 6 months to produce the desk study and field assessment.</p> <p>Component 2: Feed mill development Activity 2.1: Identify investors Activity 2.2: Arrange investment incentives Activity 2.3: Technical assistance for investors Outputs for Activities 2.1-2.3: Functional feed mills. Once the assessment is written and published, potential investors, in the areas determined to be the best locations, will be approached by an investment team consisting of the following: 1 international agribusiness consultant 1 international feed mill/feed manufacturing consultant 2 Senior level MLFI officers with backgrounds in agribusiness Once investors are approached negotiations for investment will begin. The idea will be</p>
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Items	Information
	that the donor agency will provide 2 international consultants for 1 year to provide technical assistance while the government will provide tax breaks, possibly free land, and any other incentives that will help facilitate construction of a feed mill. Please note that another CAMP Project titled 'Development of feed testing and analysis laboratory project' outlines the responsibility of the government for on-going work and inspection with feed mills.

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	A qualified international and national feed industry team with feed industry experience for the assessment. The international team will work with a team of identified professionals from South Sudan to provide technical assistance to feed mill private investors.
(2) Description of beneficiaries within the framework of the project:	Primary beneficiaries are livestock, poultry, and aquaculture producers because they will have a reliable source of quality local feed. Secondary beneficiaries are consumers of animal, poultry and aquaculture protein since the outcome of a feed mill will be increased protein production.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	A functioning and profitable feed manufacturing facility that will contribute to the economic growth of the livestock, poultry and aquaculture industry.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative or positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: d</td> <td>Project:</td> </tr> <tr> <td>Positive: d</td> <td>a: is likely to have minimal or little impact on the environment and/or society</td> </tr> <tr> <td></td> <td>b: may have an impact on the environment and/or society</td> </tr> <tr> <td></td> <td>c: is likely to have a significant impact on the environment and/or society</td> </tr> <tr> <td></td> <td>d: will have a significant impact on the environment and/or society</td> </tr> </table>	Negative: d	Project:	Positive: d	a: is likely to have minimal or little impact on the environment and/or society		b: may have an impact on the environment and/or society		c: is likely to have a significant impact on the environment and/or society		d: will have a significant impact on the environment and/or society
Negative: d	Project:										
Positive: d	a: is likely to have minimal or little impact on the environment and/or society										
	b: may have an impact on the environment and/or society										
	c: is likely to have a significant impact on the environment and/or society										
	d: will have a significant impact on the environment and/or society										
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> This project will have a negative impact. Although the desk study will have minimum impact on the environment and society the development (building) of a feed manufacturing facility has the potential of significantly influencing the environment and society. The impact can be controlled with focused interventions that deal with the environmental waste (water, air) and internationally accepted building codes. <p>(Positive)</p> <ul style="list-style-type: none"> In the long run, society will benefit due to a reduced per unit cost of protein. 										

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> No functional feed manufacturing facilities in South Sudan
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> A published assessment of prime locations to construct feed mills Number of functioning feed manufacturing facilities
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> Directorate of Planning Directorate of Animal Production and Range Management Private Sector
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> Directorate of Animal Production and Range Management– potentially a public entity that awards licenses to mills Directorate of Investment, Marketing, and Supplies Private sector

2.7 Required human resources

(1) Principle of human resources management:	International consultants will transfer knowledge to MLFI staff who will in turn provide on-going technical assistance to feed mills.
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> 2 senior level MLFI officers with backgrounds in agribusiness to work on the assessment and investor teams. 10 government feed industry inspectors (one for each state) that will be responsible for conducting routine inspections and collecting feed samples from each feed mill.
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<ul style="list-style-type: none"> 1 international agribusiness consultant. 1 year assignment. 1 international feed mill/feed manufacturing consultant. 1 year assignment. 1 international assessment consultant. 6 month assignment. 1 international consultant (feed analysis specialist). 1 year assignment (6 months training central laboratory staff and 6 months training feed mill laboratory staff. 1 international consultant (feed, crop, pesticide, inspection expert) to train 10 government inspectors. 6 month assignment. 1 senior level scientist for each feed mill laboratory. 1 lab assistant for each feed mill laboratory. 1 feed mill manager. 1 feed mill supervisor with experience in developing feed rations for poultry, fish, and

Items	Information
	livestock. • 10 skilled feed mill workers. Please note that the above listed feed mill workers are for each feed mill. Once the number of actual feed mills are constructed and operating the true number of staff will change depending on the number of feed mills and size of the feed mills.

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	<table border="1"> <tr> <td>M</td> <td>L: Low M: Medium H: High (select an indicator from the list)</td> </tr> </table>	M	L: Low M: Medium H: High (select an indicator from the list)
M	L: Low M: Medium H: High (select an indicator from the list)		
(2) Explanation of expected risks:	The risks are Medium. First with environmental issues (air, water, waste, ground). Second proper permission for building a facility. Inspection fees. Land tenure. Taxation issues. Securing financing. Securing raw ingredients. Access to roads. Access to electricity, water and sanitation.		

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	This is a private sector driven project.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	Human resources (on-going): <ul style="list-style-type: none"> • 2 senior level MLFI officers to provide oversight of the feed mill industry. • 2 mid-level MLFI administrative staff. • 10 government feed industry inspectors (one for each state) that will be responsible for conducting routine inspections and collecting feed samples from each feed mill. Other on-going costs: <ul style="list-style-type: none"> • Communication allowance (cell phones and internet). • Transportation allowances. • Laptops or desktop computers for each staff.
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Part 3: Project cost estimation

Project duration	SSP/USD = 4												Total														
	Phase 1			Phase 2			Phase 3			Phase 4				Total													
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27			27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40
1 Management and operation of project																											
1 Deployment of government staff																											
1 Assessment survey (per diem)																											
2 Assessment survey (transportation)																											
3 Technical assistance (per diem)																											
4 Technical assistance (transportation)																											
2 Procurement of administrative services (contracted)																											
3 Procurement of professional services (contracted)																											
1 International consultant (assessment/survey)																											
2 International consultant (agri-business)																											
3 International consultant (feed mill/ feed manufacturing)																											
4 Implementation of staff training																											
5 Implementation of research, studies and surveys																											
6 Delivery of extension and training services to the private sector																											
1 Fuels for assessment survey																											
2 Fuels for technical assistance																											
7 Operation and maintenance																											
2 Construction of infrastructure and procurement of equipment																											
1 Construction of office buildings																											
2 Construction of research, training and other specialized buildings																											
3 Construction of feeder roads																											
4 Construction of production, market and transportation facilities																											
5 Acquisition of land																											
6 Procurement of vehicles																											
7 Procurement of equipment																											
3 Subsidies, equity and loans																											
1 Provision of cash and/or in-kind subsidies																											
2 Provision of training services to the private sector																											
3 Equity investments																											
4 Provision of loans																											
5 Social assistance/donation (Emergency)																											
Total (SSP '000)																											
Total (USD '000)																											
% to total																											

Public sector project
Routine work by government
Private sector project
Routine work by private sector

3.4.14 Forage crops production project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Livestock		
(2) Project name:	Forage crops production project		
(3) Project ID:	0 2 1 4 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2017/18	Ending FY: 2024/25	Duration (years): 8
(5) Total investment:	SSP 2,374,000	USD 593,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		LS.SA6	Livestock production and processing enhancement	Table 2-3
(2) Government organisation:	05	MLFI-AP	Directorate of Animal Production and Range Management	Table 2-6
	08	MLFI-EX	Directorate of Livestock and Fisheries Extension	Table 2-6
(3) Activity types:	301	PS-PR	Private Sector-Production	Table 2-12
				Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	X
	06	PS	Private sector project	X
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	X
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income		

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:	<p>Among the constraints facing livestock development in South Sudan, inadequate and inconsistent feed supplies stand out as one of the most important. Seasonal variations in feed quantity and quality cause fluctuations in animal nutrition and productivity throughout the year. One recommended means of relieving the nutritional constraint is to incorporate forage legumes into animal diets. Such legumes can be grown in pure stands on farms, incorporated into natural pastures, intercropped or cultivated in fodder banks (fodder banks are dense stands of forage legumes grown on a small area (about 4 ha) for 2 to 3 years to provide dry-season feed supplementation). Progress in such incorporation in South Sudan has been slow to non-existent.</p> <p>Forage crops play varying roles in the different livestock production systems. In general, they are important as adjuncts to crop residues and natural pastures and may be used to fill feed gaps during periods of inadequate crop residue and natural pasture supply. Even in the presence of abundant crop residues, which are often free feed for ruminants, forage crops, especially legumes, are needed to improve the utilization of crop residues. Crop residues are potential energy sources while forage legumes provide protein. Forage also provide benefits to other crops. When used in rotation with other crops, they provide benefits such as soil fertility through their nitrogen-fixing ability and are also useful in breaking insect, weed or disease cycles which are likely to occur in their absence.</p>
(2) Objectives:	<p>Through technical assistance from the public sector to the private sector, large scale adoption of forage crops across South Sudan to supplement livestock feed to improve animal nutrition, improve fattening rates, and provide feed for livestock during times of natural pasture and crop residue scarcity.</p>
(3) Overall description including temporal and spatial extent of project:	<p>The production quantity of forage crops in South Sudan is not known. This project will conduct an in-depth assessment to determine the amount of production, if any, of forage crops. After the assessment has been published and shared with all stakeholders, the MLFI national, state, and county livestock extension specialists will provide technical assistance to interested producers in the private sector. Technical assistance will come in the form of providing linkages to import quality legume seed into South Sudan, proper seeding, proper planting, rotational schedules of legume changed with cover crops such as oats, and various harvest methods that will benefit livestock.</p>
(4) Component structure:	<p>Component 1: Assessment Component 2: Training</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1: Assessment</p> <p>Activity 1.1: An assessment team consisting of international and national specialists will conduct an in-depth assessment of the current production of forage crops in South Sudan.</p> <p>Outputs: The assessment team will consist of the following:</p> <ul style="list-style-type: none"> 1 international assessment consultant 1 international forage specialist (agronomist) 2 MLFI Animal Production and Range Management Specialists 2 MLFI Livestock and Fisheries Extension Specialists <p>This assessment team will take 6 months to conduct an in-depth assessment of forage crops in South Sudan. Once finished the assessment will be written, published, and shared with all stakeholders. During the same time the assessment is taking place a list of interested private sector producers will be kept for follow up on training.</p> <p>Component 2: Training</p> <p>Activity 2.1: A training team consisting of international and national specialists will conduct training for state livestock extension workers and county CAHW workers. These trained workers would then be expected to work directly with interested private sector producers in planting, harvesting, and possibly marketing forage crops for livestock.</p> <p>Outputs: The training team will consist of the following individuals:</p> <ul style="list-style-type: none"> 1 international forage specialist (agronomist) 2 MLFI Animal Production and Range Management Specialists 2 MLFI Livestock and Fisheries Extension Specialists <p>The training team will conduct two sessions of training. The first session would be specific to the 70 state livestock extension workers. This training would take place for 5 days in Juba. The second session would be specific to 158 CAHW county workers. This training would also be for 5 days and conducted in Juba. Attendees will be trained in all aspects of forage production with an emphasis on promoting</p>
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Items	Information
	<p>forage crops to livestock producers throughout the country.</p> <p>Activity 2.2: This project serves as a great cross cutting opportunity. It can be incorporated into existing CAMP project profiles such as "Creation of livestock research centers" and "Enhancement of demonstration farms" projects, plus Crops projects. Forage production research plots would be incorporated into livestock research centres and demonstration farms, and would promote top producing forage crops for livestock. State and county extension workers can utilize demonstration farm forage plots to help promote the planting of forage crops throughout South Sudan.</p> <p>Output: This activity has been outlined in other CAMP project profiles.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	International and national agronomists with experience in forage crop production for livestock. State and county extension workers with experience and technical training in forage crop production.
(2) Description of beneficiaries within the framework of the project:	The primary beneficiaries are livestock producers.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	Widespread forage crop production in South Sudan for the purpose of supplementing livestock feed to improve animal nutrition, improve fattening rates, and provide feed for livestock during times of natural pasture and crop residue scarcity. Forage production can also become a thriving business venture where forage can be sold to other livestock producers.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative or positive impact (select an indicator from the list in the right):	<p>Negative: b Positive: d</p> <p>Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society</p>
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> Forage crop production may have a negative impact on the environment if farmers start clear cutting forests to make room for land to plant forages. This should be discouraged. <p>(Positive)</p> <ul style="list-style-type: none"> Forage crop production will reduce the amount of fertilizer needed on the soil which is a significant positive impact on the environment. Production of forages has a significant positive impact on producers because of increased nutrition for their livestock, increased food security, and the possibility of selling forages to provide income.

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> No known forage crop production in South Sudan.
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> Number of producers recorded as raising forage crops Number of hectares of land under forage crop production
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> Records kept by state and county extension workers and CAHWs.
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> Directorate of Animal Production and Range Management Directorate of Livestock and Fisheries Extension

2.7 Required human resources

(1) Principle of human resources management:	Experienced international and national specialists in forage and livestock production. Well trained state and county extension and CAWH workers with knowledge on forage production.
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> 2 MLFI Animal Production and Range Management Specialists 2 MLFI Livestock and Fisheries Extension Specialists 70 state livestock extension workers 158 CAHW county workers
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<ul style="list-style-type: none"> 1 international assessment consultant. 6 month assignment 1 international forage specialist (agronomist). 1 year assignment.

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	M L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	The risk of this project is medium. There is risk associated with being able to import quality forage seed and risk in proper seed storage. There is risk with investing money in costly

Items	Information
	legume seed and having a crop fail.

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	This is a private sector project with technical assistance from the public sector.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>Human resources on-going:</p> <ul style="list-style-type: none"> • 2 MLFI Animal Production and Range Management Specialists • 2 MLFI Livestock and Fisheries Extension Specialists • 70 state livestock extension workers • 158 CAHW county workers <p>Other costs on-going:</p> <ul style="list-style-type: none"> • Transportation (vehicles and fuel) enabling extension workers to travel to producers within their assigned geographic regions. • Computers for extension staff. • Communication allowances (cell phones) for staff to utilize in communicating with livestock producers. • Office space in existing government or university buildings. • Office supplies and maintenance.
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3.4.15 Hides and skins processing extension project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Livestock		
(2) Project name:	Hides and skins processing extension project		
(3) Project ID:	0 2 1 5 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2017/18	Ending FY: 2024/25	Duration (years): 8
(5) Total investment:	SSP 6,577,000	USD 1,644,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		LS.SA6	Livestock production and processing enhancement	Table 2-3
(2) Government organisation:	05	MLFI-AP	Directorate of Animal Production and Range Management	Table 2-6
	08;04;07	MLFI-EX;IM;VS	Directorate of Livestock and Fisheries Extension; Directorate of Investment, Marketing, and Supplies; Directorate of Veterinary Services	Table 2-6
(3) Activity types:	301	PS-PR	Private Sector-Production	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	
	73	UT	Unity State	
	81	WA	Warrap State	
	82	NB	Northern Bahr el Ghazal State	
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	
	91	WE	Western Equatoria State	
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	X
	06	PS	Private sector project	X
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	X
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

One important by-product from the livestock industry is hides and skins. Hides and skins are further developed into leather which has a multitude of uses. The auto industry uses it for seat covers and the fashion industry is a large consumer of leather. Recently it has been recognized that goat leather makes excellent golf gloves. Leather is the end result of processing hides and skins. Before and after the signing of the Comprehensive Peace Agreement (CPA), South Sudan has had no industry for turning hides and skins into leather. Ugandans, Kenyans, Ethiopians and North Sudanese traders have left the market of raw hides and skins due to high transport costs and taxes. Only a small percentage (about 20%) of hides and skins from slaughter facilities enter the market. Most hides and skins, of both large and small ruminants, are discarded and no value is captured. This represents a large loss in economic value to the industry and country.

Collectors play an important role in harvesting hides and skins from both slaughter facilities and from households. Hides and skins are usually bought on a per piece basis in South Sudan. Collectors work for hides and skins dealers. Dealers also hire a person to preserve and store the hides and skins. Preservation and storage facilities are rudimentary and public health issues are evident; where sun drying is practiced, a combination of frame drying and drying on the ground is common practice. Poor salting techniques and management of effluent are issues, as is the use of salt for preservation. Generally the most waste occurs at the processing/salting phase. Where dealers are closely involved in the business, there is better management of processing and grading. Preservation methods depend on the target market, with Khartoum preferring sun-drying. Hides and skins are transported in bulk, and therefore transportation is a large cost which is charged per hide or skin. Some dealers opt to take loans to purchase their own trucks to cut costs. Hides and skins are exported from the south of the country to Uganda, which in turn re-exports them after grading and minimal secondary processing. States in the north of the country export to Khartoum where there is a vibrant leather industry, or as far as Nigeria where they are consumed as food.

It is estimated that approximately 170,000 hides and 1.6 million skins enter into the hides and skins market annually. The current cost per hide for cattle is 67 cents. The current cost per skin for goats and sheep are 28 cents. These costs per hides and skins are extremely low compared to other developing countries where cow-hides bring \$30 per hide and sheep/goat skins bring \$15 each. There is enormous potential for this industry in South Sudan due to the high numbers of livestock and the fact no one is taking advantage of this market. Pig hides are consumed as food and not used in tanning. The remaining hides and skins are discarded and do not enter into the market. This represents a large waste to South Sudan. The purpose of the project is to develop the hides and skin industry into a profitable business.

(2) Objectives:

To develop a functional and transparent hides and skins industry to meet the requirement of hides and skins quality standards in the international market.

(3) Overall description including temporal and spatial extent of project:

This project will help develop the hides and skin industry into a profitable subsector. The sector can be designed in stages to capture value over time with limited resources. As financial resources increase the potential for investment into leather processing and more value adding enterprises exists.

(4) Component structure:

- Component 1: Community awareness program
- Component 2: Association development
- Component 3: Training program
- Component 4: Collection and storage facilities
- Component 5: Adoption of internationally recognized grades and standard system

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

- Component 1: Community awareness program
 - Activity 1.1: Implement a Community Awareness program which explains the economic loss of not properly harvesting hides and skins.
 - Outputs: 70 livestock extension specialists and 158 CAHW workers will be tasked to spend 5 months creating awareness throughout South Sudan of the economic loss due to not harvesting hides and skins. All these workers will record interest groups also.
- Component 2: Association development
 - Activity 2.1: Develop interested men and women into interest groups and then formalize these into registered associations.
 - Outputs: 1 international development specialist with the help of 70 state livestock extension workers will work for 1 year in developing hides and skins associations and cooperatives throughout South Sudan.

Items	Information
	<p>Component 3: Training program Activity 3.1: Develop a series of standardized training modules for the industry Activity 3.2: Identify trainers and implement a train the trainers program Activity 3.3: Implement training programs at the community level Outputs for Activities 3.1-3.3: Ongoing training program developed and implemented. 1- International consultant (leather and tanning specialist), 1- International consultant (SME specialist) and 1- International consultant (agribusiness specialist) will spend 30 days training 70 livestock extension workers in Juba on all aspects of hides and skins tanning, handling, marketing, and business management. These 70 Extension workers will then be responsible to train 158 CAHW workers for another 30 day period of time. Trainings for CAHW workers will take place in the state they reside. The 3 international consultants will spend 1 year travelling through South Sudan following up with cooperative visits, community level training, and overall technical assistance for the hides and skins industry.</p> <p>Component 4: Collection and storage facilities Activity 4.1: Establish collection sites Activity 4.2: Facilitate the development of storage facilities Outputs for Activities 4.1-4.2: Collection and storage facilities established. The 3 international consultants will work with livestock extension workers and CAHW workers during their 1 year assignment to identify private investors willing to construct collection sites and storage facilities. This will be a private sector investment with only technical assistance coming from the 3 international consultants.</p> <p>Component 5: Adoption of internationally recognized grades and standard system Activity 5.1: Perform a supply chain assessment Activity 5.2: Identify potential investors and entrepreneurs to build tannery or link with a tannery in an adjacent country to capture more monetary value Outputs: The 3 international consultants will recruit 20 workers (either recent college graduates or CAHW workers) to assist them in completing an assessment of the hides and skins industry supply chain. This assessment should take no more than 6 months. Based on this assessment, the consultants will identify and approach potential private investors willing to invest in new tanneries in South Sudan or invest in tanneries outside of Sudan. This is a private sector funded initiative with the consultants providing technical assistance as needed.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<ul style="list-style-type: none"> • A socially capable group that can create awareness and organize people into associations and cooperatives. • A group of individuals that can develop training modules and effectively deliver the information to interested parties. • A group of business minded individuals that can establish and run collection facilities which includes all logistics and activities involved with storage, transfer and sales. • A group of business investors that want to establish a commercial tannery or have the financial means to develop a reasonable business relationship with a tannery outside of South Sudan. • A group of technical specialists that can develop a grades and standards system
(2) Description of beneficiaries within the framework of the project:	<p>Primary beneficiaries are livestock producers because more value per animal is available. Secondary beneficiaries include all residents because a former waste product is no longer contaminating the environment. The individuals working in the service sector will benefit from profitable and functioning businesses.</p>

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<ul style="list-style-type: none"> • An international, transparent and profitable hides and skins program for South Sudan.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td> Negative: d Positive: d </td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: d Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: d Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • Currently hides and skins are “wasted” and not properly managed to avoid environmental waste. As the industry grows the use of either salting agents or sun drying leads to another set of environmental challenges. Central collection sites and storage warehouses will mitigate these issues. Proper training programs (proper tanning 		

Items	Information
	<p>techniques, proper storage, etc.) are also an important mitigation measure.</p> <p>(Positive)</p> <ul style="list-style-type: none"> • Livestock producers will increase their incomes because more value per animal is available when hides and skins are utilized. Furthermore the environment will improve because a former waste product is no longer being wasted and contaminating the environment.
2.6 Monitoring and evaluation for impact measurement	
(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • Unknown number of hides and skins • No known collection centres, storage, or processing facilities in South Sudan • No known associations or cooperatives involved with the hides and skins industry
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • Number of hides and skins collected • Number of hide and skin collection centres • Number of hide and skin processing centres • Number of hide and skin storage facilities • Number of tanneries or linkage with established tannery outside South Sudan • Number of people employed by the industry • Number of association, cooperatives and interest groups in hides and skins
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> • Number of registered associations and cooperatives • Number of hides and skins sold • Amount of leather sold • Ministry of Planning, Program Management Unit, attendance sheets from training series • Number of registered businesses operating in the hides and skins industry
(4) Responsible parties for the monitoring and evaluation:	<p>Directorate of Animal Production and Range Management; Directorate of Livestock and Fisheries Extension; Directorate of Investment, Marketing, and Supplies; Directorate of Veterinary Services</p>
2.7 Required human resources	
(1) Principle of human resources management:	<p>Develop skilled workers for the industry. Skills needed for harvesting, salting (treatment), flaying, scrapping hides, logistics, marketing and general trade. Unskilled labour needed for physical tasks. Individuals needed for grading. Individuals needed for business management and administration. Skills in monitoring and evaluation are needed. Supervisory skills are required.</p>
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> • 1- Senior level MLFI staff to administrate national hides and skins programs. • 1- Mid level administrative staff to work for MLFI administrator. • 70- Certified livestock extension specialists (10 in the 4 states with the most livestock and 5 in the additional 6 states). These extension workers will provide technical assistance in all aspects of the livestock industry including hides and skins. The livestock extension system is developed in another CAMP initiated project. • 158- CAHW's (2 in each county of the 79 counties of South Sudan).
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<ul style="list-style-type: none"> • 1- International consultant (cooperative development specialist). This consultant can also assist with other livestock industries where cooperatives are needed such as bees and dairy industry. 1 year assignment. • 1- International consultant (leather and tanning specialist). 1 year assignment. • 1- International consultant (SME specialist). 1 year assignment. • 1- International consultant (agribusiness specialist). 1 year assignment
2.8 Risk assessment with respect to project objectives and resources to be applied	
(1) Expected level of risk:	<p>H L: Low M: Medium H: High (select an indicator from the list)</p>
(2) Explanation of expected risks:	<p>Due to the complexity of the number of people and business linkages involved the risk is high. It can be easily controlled but will need a high level of organization and persistent follow up and monitoring. The industry is highly influenced by economic growth and any international slow down can significantly impact the industry. Another risk is with some of the renewable fibre industries.</p>
2.9 Other special considerations and/or notes	
(1) Other special considerations and/or notes:	<p>The industry is an excellent industry for SME type program. It is also an excellent candidate for public – private partnerships. It is difficult to understand how the final industry will be structured. Currently it is obvious a strong private sector will develop creating many jobs. This will be primarily a private sector driven project.</p>
2.10 Routine operation and required resources after the completion of the project	
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project: Description of the required resources can be done in an indicative manner:	<p>Human resources (on-going):</p> <ul style="list-style-type: none"> • 1- Senior level MLFI staff to administrate national hides and skins programs. • 1- Mid level administrative staff to work for MLFI administrator. • 70- Certified livestock extension specialists (10 in the 4 states with the most livestock and 5 in the additional 6 states). These extension workers will provide technical assistance in all aspects of the livestock industry including hides and skins. The livestock extension system is developed in another CAMP initiated project. • 158- CAHW's (2 in each county of the 79 counties of South Sudan). MILF will have to

Items	Information
	<p>decide how they want to fund the CAHW workers. It is recommended their salaries come from the national, state, and county governments and that these workers are incorporated into the overall livestock extension system.</p> <p>Other on-going expenses:</p> <ul style="list-style-type: none">• Cell phone and internet service for government workers (70 workers).• Transportation allowance for government workers (70 workers).

Part 3: Project cost estimation

Project duration	SSP/USD = 4																										
	Phase 1			Phase 2			Phase 3			Phase 4			Total														
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	Total	
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	Total	
1 Management and operation of project																											
1 Deployment of government staff																											
1 Association development (per diem)																											
2 Association development (transportation)																											
2 Procurement of administrative services (contracted)																											
1 International consultant (cooperative development)																											
2 International consultant (leather and tanning)																											
3 International consultant (SME)																											
4 International consultant (agri-business)																											
4 Implementation of staff training																											
1 Training for trainers at Juba (per diem)																											
2 Training for trainers at Juba (transportation)																											
3 Training for CAHWs at state (per diem)																											
4 Training for CAHWs at state (transportation)																											
5 Implementation of research, studies and surveys																											
6 Delivery of extension and training services to the private sector																											
7 Operation and maintenance																											
1 Fuels for community awareness and association development																											
2 Fuels for facilitation of development of facilities																											
3 Fuels for assessment																											
4 Fuels, consumables for monitoring, supervision, follow up.																											
2 Construction of infrastructure and procurement of equipment																											
1 Construction of office buildings																											
2 Construction of research, training and other specialized buildings																											
3 Construction of feeder roads																											
4 Construction of production, market and transportation facilities																											
5 Acquisition of land																											
6 Procurement of vehicles																											
7 Procurement of equipment																											
3 Subsidies, equity and loans																											
1 Provision of cash and/or in-kind subsidies																											
2 Provision of training services to the private sector																											
3 Equity investments																											
4 Provision of loans																											
5 Social assistance/donation (Emergency)																											
Total (SSP '000)																											
Total (USD '000)																											
% to total																											

Public sector project
Routine work by government
Private sector project
Routine work by private sector

3.4.16 Livestock auction facility improvement and management project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Livestock		
(2) Project name:	Livestock auction facility improvement and management project		
(3) Project ID:	0 2 1 6 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2020/21	Ending FY: 2024/25	Duration (years): 5
(5) Total investment:	SSP 35,611,000	USD 8,903,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		LS.SA3	Public infrastructure development	Table 2-3
(2) Government organisation:	08	MLFI-EX	Directorate of Livestock and Fisheries Extension	Table 2-6
	05:07	MLFI-AP;VS	Directorate of Animal Production and Range Management; Directorate of Veterinary Services	Table 2-6
(3) Activity types:	203	SP-EX	Service delivery and infrastructure development- Extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:	The current ruminant market structure in South Sudan is a combination of approximately 136 primary, 48 secondary and 13 terminal markets with each varying in size, structure and functionality. At this time the system is inadequate for the industry. The following are definitions of the 3 types of markets: primary markets (local markets, rural to rural transactions) where producers are the main seller, secondary markets/auctions (domestic markets with rural to urban transactions) where sellers are a mix of producers and traders, and terminal markets/auctions (hubs in the Greater Equatoria, Upper Nile and Bahr el Ghazal regions with urban to urban transaction) where livestock from surrounding counties and states are sold mostly for slaughter. In some locations producers may have to trek livestock two or three days to reach a primary market and up to a week to reach a terminal market. The infrastructure of primary markets is often times an open space with trees, no facilities and a semi-transparent system in which buyers and sellers negotiate and agree to a price. Local authorities may levy taxes and sellers manage and clean the facility. Secondary and terminal markets are generally larger and the sale area is enclosed with cattle and sheep/goats sold in separate areas. There may or may not be water and feed available. Penning facilities with adjacent pasture may be available or there may be a permanent cattle camp nearby offering services. Secondary and terminal markets are owned by either the state or county and management is by either local officials or private entrepreneurs. Disposal of dead animals is done by either burning or dumping the animals in the river. Some terminal markets may have additional facilities with revenue collection offices. With the signing of the peace agreement, secondary and terminal markets have been officially allocated outside town and urban centres but this change is viewed as risky due to security issues. There is a need to assess the current market structures and develop a long range plan which will improve access to facilities and ensure everyone has equal access, animals are comfortable with fresh feed and water, and a system for proper disposal of waste and dead animals. Poultry are sold at primary markets in rural areas and at secondary and terminal markets at county and state level.
(2) Objectives:	To develop an extensive market system that is accessible to all producers and addresses animal welfare plus environmental objectives.
(3) Overall description including temporal and spatial extent of project:	The project will review all market facilities and use the information to develop either a plan for improvement of existing facilities or the construction of new facilities. The source of funding for the program will have to be determined. If the local communities are using animal transactions as a basis of tax revenue, then the local authorities could finance the updates and new constructions; the understanding would be that once they recover the initial investment that the facility is transferred to the private sector. Prior to any construction or improvements the information will be shared with the producers of the proposed market area. This ensures a link between the various value chain stakeholders and allows for both: flow of information between all the stakeholders; and also allows any key concerns and issues to be raised prior to construction and a plan developed to mitigate concerns if needed. All market facility operations must be nationally certified and the management of each facility must be trained on basic animal welfare and comfort and proper disposal of waste. This project's components and activities will focus on secondary and terminal auctions/markets. The reason being that primary markets can simply be a watering hole, shaded area of a forest, etc. where livestock producers meet with their herds and negotiate on sales. Secondary and terminal markets need infrastructure, tax base, and revenue flow to sustain the livestock industry. Livestock auctions across the world normally only take place once per week or once per month. They do not happen every day. This project recommends that each auction takes place weekly on the same day and at the same starting time. Auctions operate by having a central ring (sale ring) where livestock from a specific owner are herded into the ring, an auctioneer sells the animals, and then the animals are herded out of the ring into holding pens waiting for the new owners to pick them up. There is always a main office where administrative staff record each sale that takes place, collect payments from buyers, subtract commission from the sale price (usually about a 5% commission per animal), then pay the seller the selling price minus the commission. The commission is how an auction facility is able to stay in business when they are operated by the private sector.
(4) Component structure:	<p>Component 1: Assessment</p> <p>Component 2: Develop plan for construction or remodel of facilities</p> <p>Component 3: Implementation of development plan</p> <p>Component 4: Employment and training</p> <p>Component 5: Transfer to private sector</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1: Assessment</p> <p>Activity 1.1: Comprehensive assessment will take place by a team of international and national specialists. Assessment will include the following:</p>
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Items	Information
	<p>Current facility evaluation (including fencing, shade, physical structures condition, construction material, electricity, water, waste) Location evaluation (including security, water, waste, proximately to trading centre town) Industry evaluation (including the area that the facility will serve, number of animals, distance, security, potential for growth, proximity to major roads, trade/migratory routes)</p> <p>Outputs: A team consisting of the following individuals will complete the assessment: 1- international consultant (assessment/evaluation specialist) 1- international consultant (livestock specialist) 1- international consultant (civil engineer with experience in agricultural structures) 2- MLFI livestock production officers (national) 10- state government livestock officers (1 per state) 2- mid level administrative assistants</p> <p>The assessment team will need 6 months to travel to current secondary and terminal facility sites (61 sites total). Note it is not practically or financially feasible to travel to all 136 primary market sites. The main team consisting of the 3 international consultants and 2 national staff will travel to each site. The 10 state government workers will only travel to sites that are close to their geographical area. Once site visits have been made then the remainder of the assessment work will take place in Juba. A published assessment will then be made available to government officials and other interested stakeholders.</p> <p>Component 2: Develop plan for construction or remodel of facilities Activity 2.1: After the assessment has been completed, the same assessment team will start a second 6 month phases of this project which will be the development plan for construction or remodel of secondary and terminal facilities. A standardized plan for each type of facility should be developed so construction and remodelling can take place efficiently and quickly. The plan will need to include recommended locations, schematics of facility design, and protocols for waste management. Activity 2.2: Part of the development plan phase should address facility financing. Firm commitments from state, county, or local government on who is going to finance needs to take place. Activity 2.3: Once the development plan is developed and published it needs to be shared with the local communities in "town hall" style meetings to address any concerns including security. Outputs: The development team consisting of 3 international consultants and 12 South Sudanese specialists will complete the development plan mainly in Juba. After the plan is developed, the state livestock officers, along with any local leaders they choose, will present the plan to local communities in their state. It is expected that at least 5 meetings per state will take place within a 1 month period of time (50 meetings total). Comments from the meetings will be recorded and forwarded to the main development team in Juba for consideration.</p> <p>Component 3: Implementation of development plan Activity 3.1: Once the development plan has been published and approved the project will enter into a 3rd phase that will last 1 year where a transparent bidding process will take place, financing will be finalized, and construction/remodelling will begin. Outputs: An implementation team will be formed for this 3rd phase. They will consist of: 1- international consultant (livestock specialist). Same as other phases. 1- international consultant (civil engineer with experience in agricultural structures). Same as other phases. 2- MLFI livestock production officers (national). Same as other phases. 10- state government livestock officers (1 per state). Same as other phases. This implementation team will oversee the construction/remodel process. It is difficult to quantify how many markets/auctions will be constructed/remodelled until the assessment plan is completed but it is expected that at least 61 sites (existing number of secondary and terminal markets) will have some type of construction take place. An approximate estimated price for construction and remodelling would be the following: Construction of new facility (secondary market): open air structure at 185 square meters with associated fencing for pens and watering facilities~ \$4,500 each Construction of new facility (terminal market): open air structure at 280 square meters with associated fencing for pens and watering facilities~\$9,000 each It is expected that if remodel is chosen the cost would be 1/2 that of construction for each facility.</p> <p>Component 4: Employment and training</p>

Items	Information
	<p>Activity 4.1: Employees will need to be hired for each facility. Again it is estimated that there will be at least 61 sites. Quantifying which sites will be secondary and which will be terminal is difficult to know at this stage.</p> <p>Outputs: The following employee structure will need to take place:</p> <p>Secondary markets (takes place once per week):</p> <ul style="list-style-type: none"> 1 auction site manager (also serves as auctioneer) 1 auction clerk (records price of sale at the sale ring) 1 runner (takes clerk sale records to the main office for processing) 3 animal handlers outside the sale ring to sort animals and herd them into the sale ring. 3 animal handlers that herd animals out of the sale ring and put them in holding pens. These same handlers verify sale receipts from buyers before animals are released. All 6 animal handlers are responsible for animal welfare. 4 administrative staff in main office to collect sale commissions and complete paperwork of sales. <p>Terminal markets (takes place once per week):</p> <ul style="list-style-type: none"> 2 auction site managers (also serve as auctioneers) 2 auction clerks (records price of sale at the sale ring) 1 runner (takes clerk sale records to the main office for processing) 5 animal handlers outside the sale ring to sort animals and herd them into the sale ring. 5 animal handlers that herd animals out of the sale ring and put them in holding pens. These same handlers verify sale receipts from buyers before animals are released. All 10 animal handlers are responsible for animal welfare. 6 administrative staff in main office to collect sale commissions and complete paperwork of sales. <p>Activity 4.2: Training for facility employees will take place. The implementation team made up of international and national specialists (listed above) will travel to each state to conduct training of auction facility employees that are located in that state. Training subjects will include animal handling, disease detection, waste management protocols, dead animal protocols, feeding and watering protocols, and financial management for office staff.</p> <p>Outputs: Each training session will last 3 days. That equals 30 days of total training time. The exact number of employees that will be attending this training is impossible to quantify at this time. However a rough estimate would be a total of 1,281 people (average of 21 employees per site x 61 sites=1,281 employees).</p> <p>Component 5: Transfer to private sector</p> <p>Activity 5.1: A team of national staff will work to identify potential private investors to take over auction facility sites.</p> <p>Outputs: A transfer team will consist of the following individuals:</p> <ul style="list-style-type: none"> 2 MLFI Animal Production staff 10 state livestock officers <p>This transfer will take place at the end of the 5th year of the project. The above mentioned staff will complete this task within a 1 year period of time and it should be part of their regular duties. MLFI should strive to provide tax breaks and donation of the auction facility land to potential investors.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	International consultants with expertise in assessments, livestock, and civil engineering. National consultants with experience in livestock and knowledge of South Sudan auction operations.
(2) Description of beneficiaries within the framework of the project:	The primary beneficiaries are livestock producers because they will now have a transparent and readily available market system. Secondary beneficiaries are livestock traders, supply chain vendors, and consumers.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	• A transparent nationwide functional market system that allows for easy sales of livestock throughout the country.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: d Positive: c</td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: d Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: d Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social	<p>(Negative)</p> <ul style="list-style-type: none"> • Auction sites if not managed properly will have a significant negative impact on the environment through animal waste and improper disposal of dead carcasses. Each 		

Items	Information
impact, and mitigation measures:	<p>facility will need two locations near the facility (away from water) where animal waste can be taken after each auction day and a second location where all dead animals can be taken. Animal waste then needs to be transported to fields where it can be applied as fertilizer and animal carcasses should be taken to a municipal dump where they are buried.</p> <p>(Positive)</p> <ul style="list-style-type: none"> This project will provide a positive impact with easier access for livestock producers to sell their animals in a safe environment. This will increase their incomes.

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> Unaccounted for auction facilities
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> Number of licensed, inspected and properly designed market facilities
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> Local authorities, copies of approved licenses, signup sheets from training, MLFI officials
(4) Responsible parties for the monitoring and evaluation:	Directorate of Livestock and Fisheries Extension; Directorate of Animal Production and Range Management; Directorate of Veterinary Services

2.7 Required human resources

(1) Principle of human resources management:	There are multiple HR requirements needed. Unskilled and skilled workers are needed. Workers to handle livestock are needed. Program managers are needed. Office skills are needed as well as business skills. Transparency and honesty is essential.
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> 2- MLFI livestock production officers (national). 10- state government livestock officers (1 per state). <p>The following human resources will be part of the public sector for 5 years then transition into the private sector:</p> <p>Secondary markets (takes place once per week):</p> <ul style="list-style-type: none"> 1 auction site manager (also serves as auctioneer) 1 auction clerk (records price of sale at the sale ring) 1 runner (takes clerk sale records to the main office for processing) 3 animal handlers outside the sale ring to sort animals and herd them into the sale ring. 3 animal handlers that herd animals out of the sale ring and put them in holding pens. These same handlers verify sale receipts from buyers before animals are released. All 6 animal handlers are responsible for animal welfare. 4 administrative staff in main office to collect sale commissions and complete paperwork of sales. <p>Terminal markets (takes place once per week):</p> <ul style="list-style-type: none"> 2 auction site managers (also serve as auctioneers) 2 auction clerks (records price of sale at the sale ring) 1 runner (takes clerk sale records to the main office for processing) 5 animal handlers outside the sale ring to sort animals and herd them into the sale ring. 5 animal handlers that herd animals out of the sale ring and put them in holding pens. These same handlers verify sale receipts from buyers before animals are released. All 10 animal handlers are responsible for animal welfare. 6 administrative staff in main office to collect sale commissions and complete paperwork of sales.
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<ul style="list-style-type: none"> 1- international consultant (assessment/evaluation specialist). 1 year assignment. 1- international consultant (livestock specialist). 1.5 year assignment. 1- international consultant (civil engineer with experience in agricultural structures). 1.5 year assignment.

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	<table border="1"> <tr> <td>H</td> <td>L: Low</td> <td>M: Medium</td> <td>H: High</td> <td>(select an indicator from the list)</td> </tr> </table>	H	L: Low	M: Medium	H: High	(select an indicator from the list)
H	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	The level of risk associated with the project is high due to the complexity of issues. Security is always an issue where producers could have livestock stolen. Livestock producers also have the risk of being cheated. Buyers of livestock run the risk of purchasing livestock that has a disease. There is also a high risk of disease transmission between herds of livestock as they come together to be sold. This disease transmission also has the potential for zoonotic (humans catching the disease) issues.					

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	This project will transition into a private sector industry.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project.	The facilities will have to be monitored. Monitoring is best if it can become local working from a standardized format. The following will be on-going human resources that will monitor auction facilities: <ul style="list-style-type: none"> 2- MLFI livestock production officers (national). 10- state government livestock officers (1 per state).
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Items	Information
Description of the required resources can be done in an indicative manner.	Other on-going costs: <ul style="list-style-type: none">• Communication allowances (cell phone and internet)• Transportation allowances• Computers

02.16 Livestock auction facility improvement and management project (cont.)

SSP/USD = 4

Cost group	Phase 1				Phase 2				Phase 3				Phase 4				Total											
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000	USD '000	% to total
Project duration																												
Total (SSP '000)						2,865	2,655	10,533	9,777	9,781																	35,611	100%
Total (USD '000)						716	664	2,633	2,444	2,445																	8,903	
% to total						8%	7%	30%	27%	27%																	100%	
5 Revenue (Auction charges to cover employees wages)																												
Total (SSP '000)								9,768	9,768	9,768																	29,304	
Total (USD '000)								2,442	2,442	2,442																	7,326	
% to total								33%	33%	33%																100%		

Public sector project
 Routine work by government
 Private sector project
 Routine work by private sector

3.4.17 Livestock harvest facilities improvement and management project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Livestock		
(2) Project name:	Livestock harvest facilities improvement and management project		
(3) Project ID:	0 2 . 1 7 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2023/24	Ending FY: 2029/30	Duration (years): 7
(5) Total investment:	SSP 5,224,000	USD 1,306,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		LS.SA3	Public infrastructure development	Table 2-3
(2) Government organisation:	07	MLFI-VS	Directorate of Veterinary Services	Table 2-6
	05;08	MLFI-AP;EX	Directorate of Animal Production and Range Management; Directorate of Livestock and Fisheries Extension	Table 2-6
(3) Activity types:	301	PS-PR	Private Sector-Production	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	X
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	
	73	UT	Unity State	
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	
	83	WB	Western Bahr el Ghazal State	
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	
	92	CE	Central Equatoria State	
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	X
	06	PS	Private sector project	X
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	X
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>Although the exact size of the ruminant population in South Sudan is not know it can be estimated that the potential economic value of the industry based off early 2014 prices is approximately \$10 billion (USD). Moreover, estimates for red meat consumption in South Sudan are equally variable among sources which range from as little as 4.7 kg to 19.7 kg per person per annum. In comparison, red meat consumption ranges from 4.0 kg to 63 kg from various countries in Africa with an average of 19.4 kg in 2009. There is enormous potential for red meat production, processing, wholesale, and retail sales in South Sudan.</p> <p>Slaughter and processing facilities in South Sudan are minimal and do not meet any international standards in terms of generally accepted practices for harvesting and processing of livestock. Most state capitals in South Sudan have slaughter slabs, with some like Aweil, Northern Bahr el Ghazal State, now having a harvest facility. However, in the majority of county capitals animals are slaughtered in the bush without veterinary supervision and inspection. Furthermore, the conditions are unacceptable in terms of sanitation and there is no consideration for handling waste. Further-processing (wholesale and retail meat cuts) facilities are limited and similar to the harvest facility lack proper sanitation. Additionally the cold chain for proper storage and transport is limited. The poor harvesting, processing and transport conditions in South Sudan have to be addressed along with the associated waste and environmental factors.</p> <p>A major constraint expressed across the country is the absence of a legal framework to facilitate meat inspection and failure by the other divisions of government to consult with veterinary authorities in situating slaughter houses. The veterinary service directorate relies on “goodwill” and outdated laws to carry out meat inspection. Otherwise, the owners of the meat/cattle have the final say on the status of the meat.</p> <p>Harvest facilities are government owned but operated by local authorities. Successful harvest facilities should be privately owned with the government only providing veterinarians to do post mortem inspection of carcasses and to ensure sanitary and waste policies are being followed.</p>
(2) Objectives:	<ul style="list-style-type: none"> • Construct at least 3 harvest facilities (3 of the states with the highest livestock population). • Provide training to facility staff on proper methods for humane slaughter, most efficient way to break down livestock carcasses, maintain high sanitary standards, and best way to dispose of waste. • Provide training to government veterinarian and sanitation inspectors on carcass disease identification, sanitation protocols, and quality/yield grading systems. • Review current legislation related to meat inspection for South Sudan and if needed update policies to include a comprehensive inspection system for each harvest facility in each state.
(3) Overall description including temporal and spatial extent of project:	<p>Although exact livestock numbers for South Sudan do not exist, the CAMP Situation Analysis report of 2013 estimates the 3 states with the highest livestock population/concentrations are Eastern Equatorial, Lakes, and Upper Nile. It is only logical to locate and construct harvest facilities in these states since transport costs would be reduced when bringing livestock to the facility to be harvested. Geographically locating the facilities in these states would put a harvest facility in the Southeast part of the country (Eastern Equatorial State), Central part of the country (Lakes State), Northern part of the country (Upper Nile State), and Western part of the country (currently existing harvest facility in Aweil). There is a current good example of a harvest facility. In Aweil there was a harvest facility constructed under the Sudan Productive Capacity Recovery Programme (SPCRP) which has animal handling facilities that offer ample space for animals to rest and drink water and facilitate ante mortem inspection.</p> <p>Training of harvest facilities staff will be vital. Staff will need to be trained on the following:</p> <ul style="list-style-type: none"> • Ante mortem inspection of livestock • Proper humane livestock handling techniques • Humane slaughter techniques (use of stun guns for example) • Most efficient methods for hanging a carcass after slaughter • Most efficient methods for breaking down a carcass • Sanitary processing protocol. Employees could be trained using the internationally recognized Hazardous Analysis Critical Control Point (HACCP) system for sanitation. • Proper cold chain handling of wholesale meat cuts for packaging, shipping/transport to retail facilities. • Proper facility waste disposal procedures <p>Training of government veterinarian inspectors and sanitation inspectors will need to</p>

Items	Information
	<p>include the following areas:</p> <ul style="list-style-type: none"> • Proper inspection protocols of ante mortem and post mortem of animals. • Training on identification of diseases that would condemn carcasses and organs from being sold to the consumer (i.e. bovine tuberculosis, Cystercircus bovis, icterus, liver flukes, liver cirrhosis and abscesses). • Training on HACCP sanitation program. • Training on animal yield and quality grading systems (i.e. Prime, Choice Select quality grades). • Animal handling and welfare issues (i.e. slaughter techniques and ante mortem handling). <p>The Ministry of Agriculture must review current legislation as it relates to meat inspection and sanitation protocols for any facility processing meat products. If current legislation does not exist or is outdated, comprehensive legislation and enforceable policies must be enacted. Each harvest facility where slaughter of an animal or poultry takes place must have a government veterinarian present each day of slaughter to inspect post mortem animal and poultry carcasses. For facilities that only process meat products, government inspectors must be hired in each state to provide regular facility inspections to insure sanitation protocols are being followed.</p>
(4) Component structure:	<p>Component 1: Feasibility study. Component 2: Bidding process and construction. Component 3: Training of harvest facility staff and government veterinarian and sanitation inspectors. Component 4: Meat inspection legislation and enforcement implemented.</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Feasibility study</p> <p>Activity 1.1: In partnership with private sector investors and government officials conduct a feasibility study determining the best location within the 3 states (highest livestock populations) to construct harvest facilities.</p> <p>Outputs: 3 locations will be chosen to construct harvest facilities. Preferably in the states of Eastern Equatorial State, Lakes State, and Upper Nile State. 2 senior government officials with MLFI will work with private investors for 6 months to determine suitable locations.</p> <p>Component 2: Bidding process and construction.</p> <p>Activity 2.1: Implement a transparent bid process to construct harvest facilities. There should be separate bids for construction of the facilities and procurement of equipment to be housed in the facilities.</p> <p>Outputs: Construction of 3 harvest facilities and waste holding ponds. Procurement of equipment for each facility (band saw, grinder, tenderizer, refrigeration units, freezer rooms, ceiling pulley system with hooks, outside holding pens and watering troughs, inside containment chute for slaughter process. Construction and equipment costs would be private sector investments.</p> <p>Component 3: Training of harvest facility staff and government veterinarian and sanitation inspectors.</p> <p>Activity 3.1: Train harvest facility staff. 10 staff from current facility in Aweil will be trained along with 10 staff for each of the new 3 facilities.</p> <p>Outputs: A total of 40 staff will be trained. Staff will go through an intensive training schedule for 5 days a week for 6 weeks. 40 staff with 30 days of training. Training will need to take place at the Aweil facility. Harvest facility staff will be properly trained in all aspects of livestock harvest facility operation and will become HACCP certified.</p> <p>Activity 3.2: Train government veterinarian and sanitation inspectors. There will be 2 government inspectors for each of the 4 facilities that will go through a 6 week intensive training program. There will 50 government sanitation inspectors (5 for each state) that will participate in an intensive 6 week program. Total trainees will be 58 for 30 days in Juba.</p> <p>Outputs: The South Sudanese government will have trained, competent staff inspecting meat products throughout the country. This will increase the safety of food being eaten by the consumer and help increase export markets of South Sudanese meat products.</p> <p>Component 4: Meat inspection legislation and enforcement implemented.</p> <p>Activity 4.1: Current Ministry of Agriculture Officials will review existing meat and meat processing inspection/sanitation legislation. Existing policies will be updated to include inspection services for all harvest facilities by veterinarians as well as sanitation inspectors that will have the authority to inspect all meat processing facilities. Regulatory and enforcement policies will also be implemented.</p>

Items	Information										
	<p>Outputs: An updated, comprehensive legislation document that is transparent and shared with all stakeholders that clearly defines rules and regulations pertaining to meat processing.</p>										
2.3 Service providers and beneficiaries											
(1) Description of service providers within the framework of the project:	<ul style="list-style-type: none"> • 40-harvest facility staff (10 for each of the 4 facilities) with experience in slaughter, processing, sanitation, and animal handling for cattle, sheep, goats, and pigs. • 8-veterinarian inspectors (2 for each of the 4 facilities) with experience in animal handling, carcass evaluation, disease identification, and quality/yield grading. • 50-government sanitation inspectors (5 for each state). • 1-international consultant (harvest facility and meat processing specialist) to complete a 1 year assignment. • 1-international consultant (meat processing facility and HACCP sanitation specialist) to complete a 1 year assignment. 										
(2) Description of beneficiaries within the framework of the project:	<p>Primary beneficiaries will be livestock producers that will have sanitary facilities to have their livestock processed. Secondary beneficiaries will be consumers of meat in South Sudan.</p>										
2.4 Outcomes, impact and contributions to value added (i.e. economic growth)											
(1) Outcomes and impact:	<p>Registered and sustainable associations with a comprehensive assessment to be used by private sector for constructing and maintaining harvesting and processing facilities.</p>										
(2) EIRR and/or FIRR, and/or other economic analysis:	<p>(if applicable)</p>										
2.5 Environmental and social impact, and mitigation measures											
(1) Expected level of negative or positive impact (select an indicator from the list in the right):	<table border="1" style="width: 100%;"> <tr> <td style="width: 15%;">Negative: d</td> <td>Project:</td> </tr> <tr> <td>Positive: d</td> <td>a: is likely to have minimal or little impact on the environment and/or society</td> </tr> <tr> <td></td> <td>b: may have an impact on the environment and/or society</td> </tr> <tr> <td></td> <td>c: is likely to have a significant impact on the environment and/or society</td> </tr> <tr> <td></td> <td>d: will have a significant impact on the environment and/or society</td> </tr> </table>	Negative: d	Project:	Positive: d	a: is likely to have minimal or little impact on the environment and/or society		b: may have an impact on the environment and/or society		c: is likely to have a significant impact on the environment and/or society		d: will have a significant impact on the environment and/or society
Negative: d	Project:										
Positive: d	a: is likely to have minimal or little impact on the environment and/or society										
	b: may have an impact on the environment and/or society										
	c: is likely to have a significant impact on the environment and/or society										
	d: will have a significant impact on the environment and/or society										
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • There is the potential for significant negative impact to the environment due to waste coming from the harvest facility. During construction mitigation plans such as waste water ponds, proper drainage systems, and the capture of blood and other waste to be recycled for farm fertilizers need to be implemented. <p>(Positive)</p> <ul style="list-style-type: none"> • Constructing functional, sanitary harvest facilities will bring South Sudan into the international market as well as creating an avenue for livestock producers to sell animals. This will be a significant positive impact on the economic development of the livestock industry. 										
2.6 Monitoring and evaluation for impact measurement											
(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • 1 functioning harvest facility in Aweil. • Unaccounted for slab harvest facilities throughout the country. • Inadequate veterinarian inspectors. • Inadequate sanitation inspectors. 										
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • 4 functioning harvest facilities in the country. • Veterinarian inspectors located within each harvest facility. • Sanitation inspectors located in each state with authority to inspect all meat processing facilities. 										
(3) Methods of measurement and sources of information:	<p>Government inspectors will be expected to complete regular reports.</p>										
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> • Directorate of Veterinary Services; Directorate of Animal Production and Range Management; Directorate of Livestock and Fisheries Extension 										
2.7 Required human resources											
(1) Principle of human resources management:	<p>Trained, competent employees in the private sector harvest facilities that are able to humanely handle and slaughter livestock. Transparent and well trained veterinarian and sanitation inspectors in the public sector.</p>										
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> • 2-senior level MLFI staff to work with private investors for no longer than 6 months to find suitable harvest facility locations. • 8-veterinarian inspectors (2 for each of the 4 facilities) with experience in animal handling, carcass evaluation, disease identification, and quality/yield grading. • 50-government sanitation inspectors (5 for each state). 										
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<ul style="list-style-type: none"> • 40-harvest facility staff (10 for each of the 4 facilities). • 1-international consultant (harvest facility and meat processing specialist) to complete a 1 year assignment. • 1-international consultant (meat processing facility and HACCP sanitation specialist) to complete a 1 year assignment. 										

Items	Information					
2.8 Risk assessment with respect to project objectives and resources to be applied						
(1) Expected level of risk:	<table border="1"> <tr> <td>H</td> <td>L: Low</td> <td>M: Medium</td> <td>H: High</td> <td>(select an indicator from the list)</td> </tr> </table>	H	L: Low	M: Medium	H: High	(select an indicator from the list)
H	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	Risks of harvest facility operations are high due to handling of knives and saws by employees. Safety standards will need to be formalized before operations begin and harvest facility staff will need to be provided with safety orientation when they begin employment.					
2.9 Other special considerations and/or notes						
(1) Other special considerations and/or notes:	This is a private sector venture with government providing the inspection and regulatory component of the industry.					
2.10 Routine operation and required resources after the completion of the project						
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner:	<p>On-going human resources:</p> <ul style="list-style-type: none"> • 8- veterinarian inspectors (2 for each of the 4 facilities) with experience in animal handling, carcass evaluation, disease identification, and quality/yield grading. • 50- government sanitation inspectors (5 for each state). <p>On-going equipment costs:</p> <ul style="list-style-type: none"> • Veterinarian inspectors will need cell phone and internet capability along with computers to write reports. • Sanitation inspectors will need transportation (either official government vehicles or personal vehicle travel allowances) in order to travel to meat processing facilities throughout their assigned regions They will also need computers to complete reports, cell phones, and internet capability. 					

Part 3: Project cost estimation

Project duration	SSP/USD = 4												Total	% to total															
	Phase 1			Phase 2			Phase 3			Phase 4					SSP '000 USD '000	total													
Cost group	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40				
1 Management and operation of project																													
1 Deployment of government staff																													
1 Feasibility study (per diem, etc.)																													
2 Feasibility study (transportation)																													
3 Training for harvest facilities staff (per diem, etc)																													
4 Training for harvest facilities staff (transportation)																													
5 Monitoring of enforcement by staff (per diem)																													
6 Monitoring of enforcement by staff (transportation)																													
2 Procurement of administrative services (contracted)																													
3 Procurement of professional services (contracted)																													
1 International consultant (harvest facility & meat processing)																													
2 International consultant (meat processing HACCAP sanitation)																													
4 Implementation of staff training																													
1 Training for veterinarian/ sanitation inspectors (per diem, etc)																													
2 Training for veterinarian / sanitation inspectors (transportation)																													
5 Implementation of research, studies and surveys																													
6 Delivery of extension and training services to the private sector																													
7 Operation and maintenance																													
1 Fuels for feasibility study																													
2 Fuels for inspection																													
3 Communication for inspection																													
2 Construction of infrastructure and procurement of equipment																													
1 Construction of office buildings																													
2 Construction of research, training and other specialized buildings																													
3 Construction of feeder roads																													
4 Construction of production, market and transportation facilities																													
5 Acquisition of land																													
6 Procurement of vehicles																													
7 Procurement of equipment																													
3 Subsidies, equity and loans																													
1 Provision of cash and/or in-kind subsidies																													
2 Provision of training services to the private sector																													
1 Training for harvest facilities staff (per diem, etc)																													
2 Training for harvest facilities staff (transportation)																													
3 Equity investments																													
4 Provision of loans																													
5 Social assistance/donation (Emergency)																													
Total (SSP '000)																													
Total (USD '000)																													
% to total																													

Public sector project
Routine work by government

Private sector project
Routine work by private sector

3.4.18 Livestock identification and traceability project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Livestock		
(2) Project name:	Livestock identification and traceability project		
(3) Project ID:	0 2 1 8 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2025/26	Ending FY: 2029/30	Duration (years): 5
(5) Total investment:	SSP 2,912,000	USD 728,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		LS.SA5	Animal health and disease control services	Table 2-3
(2) Government organisation:	07	MLFI-VS	Directorate of Veterinary Services	Table 2-6
	05	MLFI-AP	Directorate of Animal Production and Range Management	Table 2-6
(3) Activity types:	104	ID-IM	Institutional development- Implementation and monitoring	Table 2-12
	203	SP-EX	Service delivery and infrastructure development- Extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	
	02	PH2	Phase II (2020/21-2024/25, 5 years)	
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	X
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:	<p>Livestock are a large natural resource in South Sudan and can become an important source of foreign exchange if managed and developed properly. However, for meat and livestock to be traded internationally animals and animal products must meet traceability standards as defined by the Codex Alimentarius (International Organization and Standardization system). The Codex Alimentarius Commission, established by Food and Agriculture Organization of the United Nations (FAO) and World Health Organization (WHO) in 1963 develops harmonised international food standards, guidelines and codes of practice to protect the health of the consumers and ensure fair practices in the food trade. The Commission also promotes coordination of all food standards work undertaken by international governmental and non-governmental organizations. The adoption of an internationally accepted ID system will allow producers in South Sudan to meet and exceed international standards. Moreover, it will provide the Directorate of Veterinary Services a system which can be used in disease monitoring and reporting. Thus, South Sudan livestock producers will have a competitive edge over the immediate surrounding areas and have a system similar to Namibia and Botswana.</p>
(2) Objectives:	<p>Develop a national livestock identification system that allows for traceability and animal movement to meet international and regional trade and health standards.</p>
(3) Overall description including temporal and spatial extent of project:	<p>The industry will adopt both Radio Frequency Identification (RFID) ear tags along with visual tags tied to a unique livestock identification numbering system which is maintained in a nationally held database. Animal movement and transfers will be recorded as the animals are exchanged (owner to owner) or moved from region to region. This allows the animal to have a "passport" which meets international traceability standards while also providing an effective disease monitoring system which can be used to trace disease outbreaks and quickly allowing a method for rapid and accurate quarantine of animals or any other necessary activity.</p> <p>Livestock identification also called ear tagging not only aids in tracing disease. It is an essential tool in genetic improvement within cattle, sheep, and goat herds. Having each animal ear tagged along with corresponding written records enables producers to remove inferior animals quickly from the herd and sell them enabling only the best animals to remain for breeding and genetic improvement purposes. Ear tags are simply put into the ear of each animal while it is restrained using a tool that inserts either plastic or metal ear tags. Each ear tag has a specific number and ear tags can also have the name of the farm or ranch written on the tag with the number. The process is similar to a person having their ears pierced for earrings.</p>
(4) Component structure:	<p>Component 1: Local workshops to create awareness. First meeting with Paramount Chiefs, Chiefs, Sub-chiefs and elders to explain program and obtain cultural permission.</p> <p>Component 2: Strategy Planning Phase</p> <p>Component 3: National implementation of identification system</p> <p>Component 4: System maintenance with data collection, tracking maps generation and stakeholder sharing of information on a transparent basis</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1: Local Workshops to create awareness. First meeting with Paramount Chiefs, Chiefs, Sub-chiefs and elders explain program and obtain cultural permission.</p> <p>Activity 1.1: Preparation and delivery of informational material</p> <p>Output: Written material that can be taken throughout South Sudan and delivered to livestock producers and tribal Elders. This could also be called trying to "sell" the idea of the new technology. The following staff would need to be part of the team that presents the plan to community leaders:</p> <ul style="list-style-type: none"> 3- Senior level staff from the Directorate of Veterinary Services. 3- Senior level staff from the Directorate of Animal Production and Range Management. 3- Community Animal Health Workers (CAHW) that are highly respected from each state (30 total but when the national team goes to each state the 3 CAHW workers will accompany them). <p>This output would take at least 6 months and require travel to each state.</p> <p>Component 2: Strategy Planning Phase</p> <p>Activity 2.1: Design a pilot program for both small and large ruminants, minimum of 1000 head in three locations (3 states with the most livestock).</p> <p>Activity 2.2: Train extension staff how to properly place tags in livestock and train computer operators how to enter and maintain data.</p> <p>Activity 2.3: Pilot Program implementation.</p>
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Items	Information
	<p>Activity 2.4: Demonstrate system functionality including development of a lessons learned document for use in national rollout</p> <p>Output (Activities 2.1-2.4): The pilot program will demonstrate to other livestock producers in the country how easy it is to implement an identification program. Seeing is believing in the international development world. Additionally extension staff will know how to properly restrain and tag animals and can teach producers this skill. Staff required for the pilot program include the following:</p> <ul style="list-style-type: none"> 3- Senior level staff from the Directorate of Veterinary Services. 3- Senior level staff from the Directorate of Animal Production and Range Management. 3- Community Animal Health Workers (CAHW) and/or state livestock extension staff. 1- International consultant (livestock specialist). To help with the initial pilot program and follow up with additional consulting with MLFI staff. 1- International consultant (GIS specialist). To train a minimum of 10 MLFI staff on how to use GIS technology. <p>Updated computers and GIS technology software. 5 computers with software~ \$\$9,000 total. 5 hand held GPS units~ \$1,500 total.</p> <p>Pilot program will begin with the 3 states with the highest livestock populations. These include Eastern Equatorial State, Lakes State, and Upper Nile State. A team of staff including 6 MLFI staff and 3 state CAHW/livestock extension workers will conduct a tagging program spanning 1 week in each state (3 weeks total).</p> <p>Component 3: National implementation of identification system</p> <p>Activity 3.1: Highlighting the success of the pilot program that took place in the 3 states implement a national program that first emphasizes regular plastic ear tags for identification of livestock. Then as the infrastructure around the livestock industry becomes stronger then introduce the Radio Frequency Identification (RFID) ear tag system. The RFID program realistically would not begin until after this project is near being finished due to constraints.</p> <p>Output: Livestock producers will now have an important and essential livestock management tool with this identification system. Livestock can be tracked as they are sold and breeding programs will be improved.</p> <p>Component 4: System maintenance with data collection, tracking maps generation and stakeholder sharing of information on a transparent basis.</p> <p>Activity 4.1: A national database must be developed, implemented, and maintained by MLFI. It is recommended that only one Directorate within MLFI (preferable Directorate of Animal Production and Rangeland Management) has access to this database to ensure quality control of inputs.</p> <p>Output: A national identification system that will allow MLFI to monitor livestock which will insure quicker response times to disease outbreaks, prevent theft of livestock, making recovery of stolen livestock simpler, and provide the livestock industry with a modern management tool that will help increase production and profitability.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<p>Four levels of service providers will be utilized. First are the information providers, second are the people needed to tag the livestock, third are the individuals required for recording and collecting field information and fourth the individuals that will maintain the databases.</p> <ul style="list-style-type: none"> • 65- Livestock extension staff, 6 per state, average. One potential method is to use teams in certain areas. • 5- Mid-level administrative staff for database entry and maintenance. These staff will be housed within the Directorate of Animal Production and Rangeland management. 2 of these staff should be database specialists with the ability to program and adopt Microsoft excel and access • 1- International consultant (livestock specialist). 1 year assignment. • International consultant (GIS and GPS mapping specialist). 6 month assignment.
(2) Description of beneficiaries within the framework of the project:	<p>The primary beneficiaries are the livestock producers that will have an official and internationally recognized ownership program. The Country will benefit because it will meet international health standards and second because the animals and products can be freely traded in the international market place. The traditional cattle rustling practices will be discouraged as animals will have numbers bearing regions, states and counties.</p>

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<ul style="list-style-type: none"> • Livestock identified. • Ability to trade livestock products in the world market place. • Modern identification system. • Better ability to manage and monitor animals for disease monitoring. • Help to discourage cattle rustling.
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Items	Information					
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)					
2.5 Environmental and social impact, and mitigation measures						
(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: a Positive: d</td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: a Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society			
Negative: a Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society					
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures	<table border="1"> <tr> <td>(Positive)</td> <td> <ul style="list-style-type: none"> Positive impact on the environment. Adoption of the system will improve security since it provides proof of ownership of the animals in a non-disputable manner while allowing producers the opportunity to trade locally, regionally and internationally. Migratory routes and grazing patterns of livestock will also be monitored to better preserve rangeland and natural resources. </td> </tr> </table>	(Positive)	<ul style="list-style-type: none"> Positive impact on the environment. Adoption of the system will improve security since it provides proof of ownership of the animals in a non-disputable manner while allowing producers the opportunity to trade locally, regionally and internationally. Migratory routes and grazing patterns of livestock will also be monitored to better preserve rangeland and natural resources. 			
(Positive)	<ul style="list-style-type: none"> Positive impact on the environment. Adoption of the system will improve security since it provides proof of ownership of the animals in a non-disputable manner while allowing producers the opportunity to trade locally, regionally and internationally. Migratory routes and grazing patterns of livestock will also be monitored to better preserve rangeland and natural resources. 					
2.6 Monitoring and evaluation for impact measurement						
(1) Measurable indicators and situation at a starting point:	The livestock identification system (ear tags and branding) in South Sudan was on Government Farms of the previous MAFAO, Marial Bai, and Kapoeta sheep ranch. Currently, the communities have their own means of identification by cutting the ears and branding.					
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> Number of animal with a unique identification. The place of origin will be traced for diseases and trade. Cattle rustling reduced. 					
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> Number of animals tagged. Staff that tags animal, IDs entered into functional database. 					
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> Directorate of Veterinary Services; Directorate of Animal Production and Range Management 					
2.7 Required human resources						
(1) Principle of human resources management:	<p>The ministry will need to develop an identification rule or numbering system unique to the Country of South Sudan.</p> <p>The animal service providers can come from the certified livestock extension system or CAHW workers. The livestock extension workers would also be excellent for the information phase.</p> <p>The data entry and database specialists will be part of the ministry (MLFI) under the Directorate of Animal Production and Rangeland Management.</p>					
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> 65- Livestock extension staff, 6 per state, average. One potential method is to use teams in certain areas. 5- Mid-level administrative staff for database entry and maintenance. These staff will be housed within the Directorate of Animal Production and Rangeland management. 2 of these staff should be database specialists with the ability to program and adopt Microsoft excel and access 					
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<ul style="list-style-type: none"> 1- International consultant (livestock specialist). 6 month assignment 1- International consultant (GIS and GPS mapping specialist). 6 month assignment 					
2.8 Risk assessment with respect to project objectives and resources to be applied						
(1) Expected level of risk:	<table border="1"> <tr> <td>M</td> <td>L: Low</td> <td>M: Medium</td> <td>H: High</td> <td>(select an indicator from the list)</td> </tr> </table>	M	L: Low	M: Medium	H: High	(select an indicator from the list)
M	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	There is a certain amount of risk involved with livestock services. Animals will have to be identified and restrained in a working area for tagging. This has a negative influence on the environment.					
2.9 Other special considerations and/or notes						
(1) Other special considerations and/or notes:	Animal holding pens and restraining chutes will be constructed for ease of ear tagging, census taking.					
2.10 Routine operation and required resources after the completion of the project						
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner:	<ul style="list-style-type: none"> New-born livestock will have to be tagged yearly. A system of monitoring needs to be developed. Tag information as related to sales and movement must be recorded electronically. If possible, an extension staff member can go to each area on a monthly basis to capture the information. Practically speaking a system similar to Namibia should be developed in which there are satellite offices where the information is captured at a local level. This can then be transferred to a central location (Juba) for entry. If needed a simple paper system for transfer and registration can be developed. These forms can be collected on a scheduled time frame and then entered into the main data base. <p>Human resources (on-going):</p> <ul style="list-style-type: none"> Average of 6 extension staff per state but no extra funding would be needed for these staff as this project should be one of their primary functions. 					

Items	Information
	<ul style="list-style-type: none">• 5- Mid-level administrative staff for database entry and maintenance. These staff will be housed within the Directorate of Animal Production and Rangeland management. 2 of these staff should be database specialists with the ability to program and adopt Microsoft excel and access

02.18 Livestock identification and traceability project

Part 3: Project cost estimation

Project duration	SSP/USD = 4																											
	Phase 1			Phase 2			Phase 3			Phase 4			Total															
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000	% to total	
1 Management and operation of project																												
1 Deployment of government staff																												
1 Pilot workshop & training (per diem)																												
2 Pilot workshop & training (transportation)																												
3 Training for state staff (per diem)																												
4 Training for state staff (transportation)																												
5 Monitoring for state activities																												
6 Monitoring for state activities																												
2 Procurement of administrative services (contracted)																												
1 Promotion video for dissemination of ear tag																												
2 Print material (for awareness)																												
3 Procurement of professional services (contracted)																												
1 International consultant (livestock)																												
2 International consultant (GPS/GIS)																												
4 Implementation of staff training																												
5 Implementation of research, studies and surveys																												
6 Delivery of extension and training services to the private sector																												
7 Operation and maintenance																												
1 Office supplies in Juba																												
2 Communications																												
3 Fuels for monitoring																												
2 Construction of infrastructure and procurement of equipment																												
1 Construction of office buildings																												
2 Construction of research, training and other specialized buildings																												
3 Construction of feeder roads																												
4 Construction of production, market and transportation facilities																												
5 Acquisition of land																												
6 Procurement of vehicles																												
7 Procurement of equipment																												
1 PC and software for tag data management (for MLFI)																												
2 Hand held GPS (for MLFI)																												
3 PC and software for tag data management (for states)																												
4 Hand held GPS (for states)																												
3 Subsidies, equity and loans																												
1 Provision of cash and/or in-kind subsidies																												
1 Plastic ear tag for pilot project																												
2 Provision of training services to the private sector																												
3 Equity investments																												
4 Provision of loans																												
5 Social assistance/donation (Emergency)																												
Total (SSP '000)																												
Total (USD '000)																												
% to total																												

Public sector project
Private sector project
Routine work by government
Routine work by private sector

3.4.19 Meat production and processing extension project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Livestock		
(2) Project name:	Meat production and processing extension project		
(3) Project ID:	0 2 1 9 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2020/21	Ending FY: 2029/30	Duration (years): 10
(5) Total investment:	SSP 4,886,000	USD 1,221,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		LS.SA6	Livestock production and processing enhancement	Table 2-3
(2) Government organisation:	05	MLFI-AP	Directorate of Animal Production and Range Management	Table 2-6
	07:08	MLFI-VS;EX	Directorate of Veterinary Services; Directorate of Livestock and Fisheries Extension	Table 2-6
(3) Activity types:	301	PS-PR	Private Sector-Production	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	X
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	
	73	UT	Unity State	
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	
	83	WB	Western Bahr el Ghazal State	
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	
	92	CE	Central Equatoria State	
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	X
	06	PS	Private sector project	X
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	X
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income		

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>South Sudan has a small but rapidly growing high income population. This comprises of senior civil servants, the business community and international aid workers largely based in Juba and the other major towns.</p> <p>Using the average meat consumption level of 80 – 130 kg per person per year for developed countries, it is possible to assume that the demand in this segment is roughly 6,900 metric ton of meat annually. This market is currently supplied from meat imported from neighbouring countries, served through high-end supermarkets and hotels, because the local supply cannot cover the demand. South Sudanese cattle producers are keeping their animals for marriage dowry and wealth accumulation instead of the commercial market. Estimates show that less than 30% of demand is currently met. Many customers have to make do with unclassified meat supplied through domestic channels.</p> <p>Although South Sudan used to export significant numbers of livestock to neighbouring countries during the period of civil war, this is no longer true and the only exports are now largely to Khartoum, largely through Bentiu (to El Obeid) in Unity, and Malakal, Renk and Manyo in Upper Nile. These exports are estimated to be around 50,000 cattle, 20,000 sheep and goats annually in addition to undocumented amounts of pork and chicken meat. The current quantity is small making enormous growth potential for this regional market.</p> <p>World demand for red meat is rapidly growing (largest growth in China) and meat consumption is expected to double by 2050. Most of the meat is expected to come from developing countries.</p> <p>The key challenges along the meat value chain in South Sudan include lack of meat policy, poor management, concentration in urban areas with limited management, animal disease, poor sanitation, poor breeds, poor processing and transport facilities, lack of access to inputs and financing, and inadequate quality control for the meat sold in the local markets. In addition there is an inadequate system of formal licensing of slaughterhouses or any health certification of the meat trade.</p> <p>The industry is ripe for growth. South Sudan has a high population of livestock which includes pigs. Rearing of pigs is an emerging activity in South Sudan. The highest concentration of pigs is in Maban County, Upper Nile State, where there are an estimated 35,000 pigs kept by the indigenous community. Pigs will provide another source of red meat and protein as South Sudan grows.</p> <p>South Sudan has an abundance of natural pastures and prime rangeland with water access. Rural communities have expressed their readiness to organize themselves into cooperative groups. Local, regional, and international markets for meat exist and red meat is in high demand. Therefore, there is urgent need for development of a legal framework to regulate meat inspection, overall food safety, meat processing, and marketing. National and state governments should encourage livestock producers to sell their animals to traders and harvest facilities to increase their personal wealth and household income. This in turn would contribute greatly to the national economy and GDP.</p>
(2) Objectives:	<p>To encourage livestock producers to start selling livestock into the meat industry, organize interested meat traders and livestock producers into associations, assess the industry, develop comprehensive extension training program. Another primary objective is quality and sanitary meat for the local consumer.</p>
(3) Overall description including temporal and spatial extent of project:	<p>The meat industry project is designed as a technical assistance project to increase the technical capacity of small holder producers in South Sudan. The program will facilitate the technical capacity and establish a strong technical base for advancing the industry. Long term strategy will require foreign assistance in the establishment of key infrastructure projects such as improved breeds, feed mills, water accessibility, waste management and slaughter facilities.</p>
(4) Component structure:	<p>Component 1: Assessment Component 2: Cooperative development Component 3: Extension training Component 4: Promotion of value added meat products</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1: Assessment Activity 1.1: An assessment team consisting of international and national specialists will conducted an in-depth 6 month meat industry assessment. This assessment will be done as a combination of a desk study and field visits to obtain accurate data. Outputs: The assessment team will consist of the following:</p>
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Items	Information
	<p>1 international assessment consultant 1 international livestock and meat industry specialist 2 MLFI Animal Production officers 3 MLFI Livestock and Fisheries extension officers</p> <p>The assessment team will complete a desk study in conjunction with field visits to butcher shops, restaurants, hotels, retail markets, and auction facilities to determine the current status of the red meat industry in South Sudan. Once data is collected a complete assessment will be written and published and made available to all stakeholders. Also as part of the assessment the team will record potential interest groups where a follow up from a cooperative development team could take place.</p> <p>Component 2: Cooperative development Activity 2.1: Using data collected from the assessment team, follow up visits will take place with interest groups. A team consisting of international and national specialists will conduct the follow up visits and form these groups into registered, operating meat industry cooperatives.</p> <p>Outputs: A cooperative development team will consist of the following: 1 international cooperative development consultant 1 international livestock and meat industry specialist 2 MLFI Animal Production officers 3 MLFI Livestock and Fisheries extension officers</p> <p>It is expected that a period of 1 year will be needed to develop and register cooperatives for the meat industry. The exact number of cooperatives is difficult to quantify but it is expected that at least 2 cooperatives per state (20 total) will be organized.</p> <p>Component 3: Extension training Activity 3.1: Technical training for livestock extension staff and newly formed cooperatives will be the primary focus of this project. An extension training team consisting of international and national staff will conduct training to state and county livestock extension staff in the areas of livestock and swine nutrition, fattening, animal health, selection of good livestock and swine, proper slaughter techniques, sanitation guidelines for meat processing, how to inspect quality and yield grade livestock and swine carcasses, and the importance of quality meat in marketing to retail stores, hotels, and restaurants.</p> <p>Outputs: The main extension training team will consist of the following: 1 international livestock and meat industry specialist 2 MLFI Animal Production officers 3 MLFI Livestock and Fisheries extension officers</p> <p>This team will develop the training curriculum in the form of PowerPoint presentations, written resource materials, and fact sheets. This phase will take 3 months. This curriculum will then be used by the team to conduct training in Juba for the 70 certified state livestock extension specialists and 158 CAHW county extension workers. The training would be split into 3 sessions. Session 1 would be for the 70 state livestock extension specialists. Session 2 would be for 79 county extension workers and Session 3 would be for the remaining 79 county extension workers. Each session would last 5 days and the training sessions would be given in Juba.</p> <p>Activity 3.2: The newly trained state and county livestock extension workers would then be required to provide training to the 20 registered cooperatives across South Sudan.</p> <p>Outputs: State and county livestock extension workers would team up based on geographical location and give the training using the same curriculum they received in Juba.</p> <p>Component 4: Promotion of value added meat products Activity 4.1: Products such as sausages, offal (bones, blood, hearts, liver, etc.), and smoked meats from livestock and swine are all valuable in the meat industry and can be described as value added products. A team of international and national specialists will promote value added meat products and provide technical assistance to private sector meat processors in South Sudan.</p> <p>Outputs: The value added meat products team will consist of: 1 international meat processing specialist 2 MLFI Animal Production officers (meats backgrounds)</p> <p>This team would identify at least 10 private sector meat processing companies, preferably in urban areas. The team would then spend time working inside the meat processing shops and/or butcher shops to provide technical assistance to the private sector businesses on the following: Various types and methods of sausage production using beef, pork, goat, and lamb meat.</p>

Items	Information
	<p>Smoked beef production also called “jerky” to be marketed as a snack food. How to properly clean offal such as liver, stomach, kidneys, and lungs and market these as delicacies. How to utilize bone and blood meal in livestock feed supplements. Equipment needed to produce sausage, jerky, and tenderized cuts of meat. Sanitation and quality control procedures for meat processing shops. It is expected that this team will spend 30 days per each private sector business for a total of 300 days.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	The training curriculum will be developed with the assistance of international and national technical specialists who will also assist in training of the trainers. The program is best implemented with a service provider with credible experience in fattening of bulls, small ruminants and swine production. National staff will accompany the international specialists.
(2) Description of beneficiaries within the framework of the project:	The primary beneficiaries are those interested in meat production and marketing. Secondary beneficiaries would include livestock producers and families (consumers) who will benefit because of increased quality meat for consumption. All participants in the value chain will benefit because of business linkages and profitable production.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	A well trained and focused meat industry that has the capacity to grow. There will be a larger amount of high quality meat and meat products available for private consumption in the market place. The increased meat supply will lead to improved health and provide a source of livelihoods which will include women and youth.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right)	<table border="1"> <tr> <td>Negative: d</td> <td rowspan="2">Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society</td> </tr> <tr> <td>Positive: d</td> </tr> </table>	Negative: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society	Positive: d
Negative: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society			
Positive: d				
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> Meat production and processing can have a significant negative impact on the environment due mainly to poor handling of waste. International and national specialists will work with meat processors to adopt best practices in being sanitary and properly disposing of waste. <p>(Positive)</p> <ul style="list-style-type: none"> The industry represents excellent opportunities for rural development, gender concerns, health issues and food security. Higher quality meat in combination with strict sanitary procedures will protect consumers. 			

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> No registered meat associations or cooperatives Number of healthy animals slaughtered daily Amount of meat in market place Number of butcheries available
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> Number of registered meat interest groups, associations and cooperatives Number of healthy animals slaughtered daily Amount of meat being sold in market place Number of meat markets
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> Number of associations, interest groups and cooperatives registered with authorities Training attendance sheets Number of meat markets recorded
(4) Responsible parties for the monitoring and evaluation:	Directorate of Animal Production and Range Management; Directorate of Veterinary Services; Directorate of Livestock and Fisheries Extension

2.7 Required human resources

(1) Principle of human resources management:	International and national staff will need to have an extensive background in the livestock and meat industries. Specifically slaughtering techniques, sanitation protocols, meat processing techniques (including modern equipment used).
(2) Required human resources in the public sector (Positions, grades and numbers):	<p>Human resources:</p> <ul style="list-style-type: none"> 2 MLFI Animal Production officers (assessment and cooperative development experience). 2 MLFI Animal Production officers (meat processing experience) 3 MLFI Livestock and Fisheries extension officers
(3) Required human resources in the private sector including	<ul style="list-style-type: none"> 1 international assessment specialist. 6 month assignment. 1 international cooperative development consultant. 1 year assignment.

Items	Information
consultants (positions, qualification and numbers):	<ul style="list-style-type: none"> • 1 international livestock and meat industry specialist. 1 year assignment. • 1 international meat processing specialist. 1 year assignment.

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	M	L: Low	M: Medium	H: High	(select an indicator from the list)
(2) Explanation of expected risks:	<p>The risk level is assessed to be medium. First the project is dependent upon a solid educational foundation. The training goals must be achieved for the project to develop properly. Factors such as accessibility to rural areas to meet with producers is a risk. There is always a risk in access to feed for livestock which in turn affects meat production. One risk worth mentioning is the social, cultural, and gender components involved with selling livestock for meat. Livestock in South Sudan have a cultural heritage of being kept to pay dowry for marriages and as a sign of wealth. Convincing tribes to change to a cash based income system could prove difficult. Also if a cash income system is developed it is important to insure women of households have access to this cash.</p>				

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	<p>The project should be focused on technical assistance during the early stages. There should be caution in wanting to quickly introduce new breeds of livestock to increase meat production. For long term progress in livestock production, a better understanding of the current native species is needed. Many times poor production is explained as poor genetics when in reality the problem is not poor genetics but a symptom of the environment. For example, reproductive efficiency is said to be low in South Sudan due to the delay in females reaching maturity at 36 to 49 months and the average age at first calving ranges from 44 to 56 months. Some of this delay could be contributed to the genetic nature of the current breeds but studies over the last twenty years have found that much of the delay can be attributed to poor nutrition. Another additional problem is a lack of understanding how to coordinate reproduction with the availability of feeds. A better understanding of the current breeds, management systems and growing conditions is needed before the introduction of new genetics.</p>
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner:	<p>Human resources on-going:</p> <ul style="list-style-type: none"> • 2 MLFI Animal Production officers • 2 MLFI National extension officers • 70 state livestock extension workers • 158 county CAHW workers <p>Other on-going expenses:</p> <ul style="list-style-type: none"> • Communication allowance (cell phones and internet) • Transportation allowances • Computers • Office maintenance and supplies
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3.4.20 Pig production extension project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Livestock		
(2) Project name:	Pig production extension project		
(3) Project ID:	0 2 . 2 0 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2020/21	Ending FY: 2029/30	Duration (years): 10
(5) Total investment:	SSP 4,403,000	USD 1,101,000	Note: Not including recurrent cost

1.2 Project characteristics:

	Code	Abbreviation	Description	Reference
(1) Subsector area:		LS.SA6	Livestock production and processing enhancement	Table 2-3
(2) Government organisation:	05	MLFI-AP	Directorate of Animal Production and Range Management	Table 2-6
	08;07	MLFI-EX;VS	Directorate of Livestock and Fisheries Extension; Directorate of Veterinary Services	Table 2-6
(3) Activity types:	203	SP-EX	Service delivery and infrastructure development- Extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	
	73	UT	Unity State	
	81	WA	Warrap State	
	82	NB	Northern Bahr el Ghazal State	
	83	WB	Western Bahr el Ghazal State	
	84	LK	Lakes State	
	91	WE	Western Equatoria State	
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:	<p>Rearing of pigs is an emerging activity in South Sudan. The highest concentration of pigs is in Maban County, Upper Nile State, where there are an estimated 35,000 pigs kept by the indigenous community for whom pigs are the most important livestock, followed by small ruminants and then cattle. Data collected by CAMP from other states shows that there are an estimated 13,720 pigs in Eastern Equatoria. Other states have very few pigs, mostly kept by just one or two persons or communities i.e., 20 pigs in Rumbek North, Lakes State, 150 pigs in Rubkona Country Unity State and 163 pigs in Wau, Western Bahr el Ghazal. There are however a few commercial enterprises in Juba, the largest with 400 crossbreeds, and 100 local breed pigs. Pigs will provide another source of red meat and protein as South Sudan grows.</p> <p>There are many advantages to raising pigs.</p> <ul style="list-style-type: none"> • Pigs utilize feed efficiently. • Pigs convert feed to meat with greater efficiency than either cattle or sheep. Fattening beef cattle requires about nine pounds of feed to produce a pound of beef, a lamb requires about eight pounds, while a hog requires from four to five pounds of feed per pound of live weight. • Pigs give better yields of usable meat. Hogs do much better in yield of usable carcass compared to other animals that produce red meat. Dressing yield is from 65 to 80 percent for hogs, 50 to 60 percent for cattle, and 45 to 55 percent for sheep and goats. • Pigs will make use of garden scraps. Pigs can convert some garden wastes and by-products into meat. • Pigs do not require large areas of land like grazing cattle, sheep, and goats require. <p>A more technically correct term when referring to pig production is swine production. Swine production will be used interchangeably with pig production throughout this project profile.</p>
(2) Objectives:	<p>To organize interested people into interest groups and associations, assess the industry, develop a comprehensive training program and develop small scale and commercially oriented swine production units. In addition the project will work to develop a simple well trained swine production industry that is focused on producing for the local fresh market during early phases with the potential to add simple value added at later stages.</p>
(3) Overall description including temporal and spatial extent of project:	<p>The swine industry project is designed as a technical assistance project to increase the technical capacity of small holder pig producers in South Sudan. The program will facilitate the technical capacity and establish a strong technical base for advancing the industry. Long term strategy will require foreign assistance in the establishment of key infrastructure projects such as competent veterinarians with experience in swine diseases, feed mills, harvesting and processing facilities.</p>
(4) Component structure:	<p>Component 1: Assessment Component 2: Cooperative development Component 3: Technical training Component 4. Business facilitation and international linkages</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1. Assessment</p> <p>Activity 1.1: A team led by MLFI officers will spend 6 months completing an in-depth assessment of the current state of the swine industry in South Sudan. While completing the assessment they will gather data on interest groups.</p> <p>Outputs: Assessment written, published and distributed within 6 months (first 6 months of year 1 of project). Data will be collected by assessment team traveling to each state 2 times with the rest of the work being completed in Juba. The assessment team will consist of the following individuals:</p> <ol style="list-style-type: none"> 1 international consultant specializing in agricultural industry assessments. 2 MLFI Animal Production officers. 3 livestock extension specialists (1 per state where pigs are concentrated). <p>Component 2: Cooperative development</p> <p>Activity 2.1: Based on the findings of the assessment team concerning interest groups, a second team led by MLFI Animal Production officers will form registered pig grower cooperatives. After the cooperatives are formed, follow up visits will take place with each cooperative and training will take place.</p> <p>Outputs: At least 4 trips (3 cooperative development trips and 1 formal training trip) will be made to each of the 3 states (where pigs are concentrated) by the cooperative team (12 trips total). Follow up training will include:</p> <ol style="list-style-type: none"> 3 training sessions (1 session per state each lasting 3 days) on creating cooperative by-laws, financial management, business development/linkages, electing officers, etc. It is estimated that 50 people will attend each session for
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Items	Information
	<p>a total of 150 people. The cooperative development team will consist of the following people: 1 international consultant specializing in cooperative development. 2 MLFI Animal Production officers. 3 livestock extension specialists (1 per state). This output will take 1 year to complete (second 6 months of year 1 and first 6 months of year 2).</p> <p>Component 3: Technical training Activity 3.1: A team of specialists led by MLFI Animal Production officers will provide extensive technical training to state livestock extension workers and county CAHW workers. Training subject areas include swine production, nutrition, proper feeding of pigs, health and disease control, genetics and breeding, pig facility management and sanitation, understanding business basics, and marketing pig meat and value added products such as offal and sausage. Outputs: A 5 day training will take place in each of the 3 states (15 training days total) and will be given to 2 livestock extension workers (2 per state for a total 6 people) and county CAHW workers (2 per county for a total of approximately 30 people). County CAHW workers will attend the training that is located in their state. The technical training will take place in the 2nd 6 months of the 2nd year of the project. These state and county workers would then be expected as part of their normal job duties to provide technical assistance to pig farmers (or potential pig farmers). The technical training team will consist of the following individuals: 1 international consultant (swine production specialist) 2 MLFI Animal Production officers 1 MLFI Livestock extension officer</p> <p>Component 4: Business facilitation and international linkages Activity 4.1: A team of swine and agribusiness specialists will identify potential commercial swine production investors from cooperatives developed. Outputs: This team will work with potential investors on setting up commercial swine production private enterprises. The team will also assist in providing linkages to financial service organizations, local farm stores, and feed mills. This phase of the project would be expected to take a minimum of 2 years and would occur starting the 3rd year of the project. The team of poultry and agribusiness specialists will consist of: 1 international agribusiness consultant (commercial swine industry background) 1 international swine technical consultant 2 MLFI Animal Production officers 1 MLFI Livestock extension officer 2 MLFI Agribusiness officers/specialists</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<p>Extension workers to provide unbiased up to date technical information. Swine industry input providers to provide quality inputs and technical information. Agribusiness service providers that will assist with access to finance, profitable business-production models. International consultants: • 1 international agribusiness consultant • 1 international assessment/survey consultant • 1 international cooperative development consultant • 1 international swine production consultant Public sector staff: • 2 MLFI Animal Production officers • 2 MLFI Agribusiness officers • 1 MLFI Livestock extension officer • 3 state livestock extension workers • 30 county CAHW workers</p>
(2) Description of beneficiaries within the framework of the project:	<p>Household swine producers will be the primary beneficiaries. Secondary beneficiaries would be commercial swine producers. Consumers will also be beneficiaries because they will have a greater variety of meat and protein options.</p>

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<p>A swine industry developed to provide meat to the local market. The program will address food security, human health, and livelihoods. The impact will be better health and a growth in GDP.</p>
(2) EIRR and/or FIRR, and/or other economic analysis:	<p>(if applicable)</p>

Items	Information					
2.5 Environmental and social impact, and mitigation measures\						
(1) Expected level of negative or positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td> Negative: d Positive: d </td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: d Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society			
Negative: d Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society					
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> Negative impact on the environment. The development of the swine industry will have a negative impact on the environment, however, mitigation plans are available to address air pollution, waste disposal, water treatment, and other negative influences as a result of the increased size of the industry. <p>(Positive)</p> <ul style="list-style-type: none"> Household swine production provides an excellent positive impact for families to provide a source of household food security and also income by selling surplus pigs and meat in the local market. Once commercial swine operations are fully operational bio-gas could be utilized from these farms. For large commercial swine operations to be constructed an Environmental Impact Assessment (EIA) is necessary. 					
2.6 Monitoring and evaluation for impact measurement						
(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> No formalized interest groups No registered cooperatives Inadequate technical training for pig producers 					
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> Number of formalized interest groups Number of registered cooperatives Number of pig producers trained 					
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> Registered cooperatives Registered interest groups Training attendance sheets Annual reports from state livestock extension workers and county CAHW workers 					
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> Directorate of Animal Production and Range Management; Directorate of Livestock and Fisheries Extension; Directorate of Veterinary Services 					
2.7 Required human resources						
(1) Principle of human resources management:	<ul style="list-style-type: none"> Capacity development of the pig and red meat supply chain actors Capacity development of the extension specialists The enabling environment is improved 					
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> 2 MLFI Animal Production officers 1 MLFI Livestock extension officer 2 MLFI Agribusiness officers 3 state livestock extension workers 30 county CAHW workers 					
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<ul style="list-style-type: none"> 1 international agribusiness consultant (1 year assignment followed by a second 6 month assignment) 1 international assessment/survey consultant (6 month assignment) 1 international cooperative development consultant (1 year assignment) 1 international swine production consultant (2 year assignment) 					
2.8 Risk assessment with respect to project objectives and resources to be applied						
(1) Expected level of risk:	<table border="1"> <tr> <td>M</td> <td>L: Low</td> <td>M: Medium</td> <td>H: High</td> <td>(select an indicator from the list)</td> </tr> </table>	M	L: Low	M: Medium	H: High	(select an indicator from the list)
M	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	<p>The risk is assumed to be medium. This assessment is based on the overall structure of the proposed industry, the various entities involved with production, interaction with government officials and other enabling environment conditions. The project is complex in nature and is dependent upon cooperation of several different entities.</p>					
2.9 Other special considerations and/or notes						
(1) Other special considerations and/or notes:	<p>The program is designed to be a technical assistance program that focuses on training. The program is not designed to provide subsidies but is focused on developing the skill sets for profitable and sustainable delivery of pork (protein) to the consumers of South Sudan.</p>					
2.10 Routine operation and required resources after the completion of the project						
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>Human resources on-going:</p> <ul style="list-style-type: none"> 2 MLFI Animal Production officers 1 MLFI Livestock extension officer 2 MLFI Agribusiness officers 3 state livestock extension workers 30 county CAHW workers <p>Other on-going expenses:</p> <ul style="list-style-type: none"> Communication allowance (cell phone and internet for each employee). Laptop computer for each employee Transportation allowances 					

Part 3: Project cost estimation

Project duration	SSP/USD = 4																									
	Phase 1			Phase 2			Phase 3			Phase 4			Total													
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000
02.20 Pig production extension project													4,398	1,100	100%											
Cost group													138	35	3%											
1 Management and operation of project													16	4	0%											
1 Deployment of government staff													12	3	0%											
1 Assessment survey (per diem)													11	3	0%											
2 Assessment survey (transportation)													7	2	0%											
3 Cooperative development trip (per diem)													6	2	0%											
4 Cooperative development trip (transportation)													9	2	0%											
5 Cooperative training trip (per diem)													9	2	0%											
6 Cooperative training trip (transportation)													6	2	0%											
7 Technical training for states officers/CAHWs (per diem)													9	2	0%											
8 Technical training for states officers/CAHWs (transportation)													6	2	0%											
9 Business facilitation activities (per diem)													14	3	1%											
10 Business facilitation activities (transportation)													12	3	1%											
2 Procurement of administrative services (contracted)													2,160	540	12%											
3 Procurement of professional services (contracted)													1,080	270	6%											
1 International consultant (agri-business)													540	135	3%											
2 International consultant (assessment and survey)													540	135	3%											
3 International consultant (cooperative development)													540	135	3%											
4 International consultant (swain production)													480	120	3%											
4 Implementation of staff training													36	9	1%											
1 Technical training for states officers/CAHWs (per diem)													30	8	1%											
2 Technical training for states officers/CAHWs (transportation)													6	2	0%											
5 Implementation of research, studies and surveys													4	1	0%											
6 Delivery of extension and training services to the private sector													3	1	0%											
7 Operation and maintenance													1	0	0%											
1 Fuels for assessment survey													1	0	0%											
2 Fuels for cooperative development trip													1	0	0%											
3 Fuels for cooperative training													1	0	0%											
4 Fuels, consumables for follow up													1	0	0%											
2 Construction of infrastructure and procurement of equipment													18	5	0%											
1 Construction of office buildings																										
2 Construction of research, training and other specialized buildings																										
3 Construction of feeder roads																										
4 Construction of production, market and transportation facilities																										
5 Acquisition of land																										
6 Procurement of vehicles																										
7 Procurement of equipment																										
3 Subsidies, equity and loans													5	1	0%											
1 Provision of cash and/or in-kind subsidies													2	0	0%											
2 Provision of training services to the private sector													2	0	0%											
3 Equity investments													2	0	0%											
4 Provision of loans																										
5 Social assistance/donation (Emergency)																										
Total (SSP '000)													4,403	1,100	100%											

02.20 Pig production extension project (cont.)

SSP/USD = 4

Cost group	Phase 1		Phase 2		Phase 3		Phase 4				Total																	
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000	% to total	
Project duration																												
Total (USD '000)						552	155	262	127	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1,101
% to total						50%	14%	24%	12%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%

Public sector project
 Routine work by government
 Private sector project
 Routine work by private sector

3.4.21 Poultry production and processing extension project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Livestock		
(2) Project name:	Poultry production and processing extension project		
(3) Project ID:	0 2 . 2 1 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2020/21	Ending FY: 2029/30	Duration (years): 10
(5) Total investment:	SSP 4,266,000	USD 1,067,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		LS.SA6	Livestock production and processing enhancement	Table 2-3
(2) Government organisation:	05	MLFI-AP	Directorate of Animal Production and Range Management	Table 2-6
	08;07	MLFI-EX;VS	Directorate of Livestock and Fisheries Extension; Directorate of Veterinary Services	Table 2-6
(3) Activity types:	203	SP-EX	Service delivery and infrastructure development- Extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated by income	

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:	<p>The official estimate for poultry was 5.6 million birds in 2006. The poultry in South Sudan is primarily a small holder subsistence industry which is dependent on day old chicks and feed from surrounding countries (Sudan, Kenya and Uganda). Moreover, some of the support from NGOs and government actors is more of a subsidy in nature and does not provide the training and enabling environment needed to develop a commercial poultry industry with functional feed mills, hatcheries, access to finance, input suppliers, cold chain facilities, and roads for ease of marketing and transport. Consumer demand is increasing in urban centers but is being filled by products from China and Brazil who have invested heavily in genetics, feeding, processing, transport and cold chain techniques. Moreover, a lack of sector policy is resulting in unfair competition from countries like Brazil and China. Inappropriate taxation for the import of feed and day old chicks discourages local production and severely increases the cost of local production. The natural resources of a vibrant poultry industry exist in South Sudan with proper training.</p> <p>Raising chickens, ducks, turkeys, and rabbits is an excellent way to provide protein to individuals in developing countries. Poultry can be raised virtually anywhere, do not need large sections of land, are easy to care for, relatively in-expensive to feed, and can provide protein in the form of both meat and eggs.</p>
(2) Objectives:	To organize interested people into interest groups and associations, assess the industry, develop a comprehensive training program and develop backyard and commercially oriented poultry production units. In addition the project will work to develop a simple well trained poultry production industry that is focused on producing for the local fresh market during early phases with the potential to add simple value at later stages. Due to the ever changing production and economic environment the project will reassess the industry and develop a long range strategy to meet future needs of South Sudan based on the existing economic and agricultural conditions.
(3) Overall description including temporal and spatial extent of project:	The poultry industry project is designed as a technical assistance project to increase the technical capacity of small holder poultry producers in South Sudan. The program will facilitate the technical capacity and establish a strong technical base for advancing the industry. Long term strategy will require foreign assistance in the establishment of key infrastructure projects such as hatcheries, feed mills, cold chains, harvesting and processing facilities.
(4) Component structure:	<p>Component 1: Assessment</p> <p>Component 2: Cooperative development</p> <p>Component 3: Technical training</p> <p>Component 4. Business facilitation and international linkages</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1. Assessment</p> <p>Activity 1.1: A team led by MLFI officers will spend 6 months completing an in-depth assessment of the poultry industry in South Sudan. While completing the assessment they will gather data on interest groups.</p> <p>Outputs: Assessment written, published and distributed within 6 months (first 6 months of year 1 of project). Data will be collected by assessment team traveling to each state 2 times with the rest of the work being completed in Juba. The assessment team will consist of the following individuals:</p> <ul style="list-style-type: none"> 1- international consultant specializing in agricultural industry assessments. 2- MLFI Animal Production officers. 10- livestock extension specialists (1 per state). <p>Component 2: Cooperative development</p> <p>Activity 2.1: Based on the findings of the assessment team concerning interest groups, a second team led by MLFI Animal Production officers will form registered poultry grower cooperatives. After the cooperatives are formed, follow up visits will take place with each cooperative and trainings will take place.</p> <p>Outputs: At least 4 trips (3 cooperative development trips and 1 formal training trip) will be made to each state by the cooperative team (40 trips total). Follow up trainings will include:</p> <ul style="list-style-type: none"> 10 training sessions (1 session per state each lasting 3 days) on creating cooperative by-laws, financial management, business development/linkages, electing officers, etc. It is estimated that 100 people will attend each session for a total of 1,000 people. <p>The cooperative development team will consist of the following people:</p> <ul style="list-style-type: none"> 1- international consultant specializing in cooperative development. 2- MLFI Animal Production officers. 10- livestock extension specialists (1 per state).
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Items	Information
	<p>This output will take 1 year to complete (second 12 months of the project consisting of second 6 months of year 1 and first 6 months of year 2).</p> <p>Component 3: Technical training Activity 3.1: A team of specialists led by MLFI Animal Production officers will provide extensive technical training to state livestock extension workers and county CAHW workers. Training subject areas include poultry production, nutrition for broilers and layers, proper feeding of poultry, health and disease control, predator control, coop management and sanitation, understanding business basics, and marketing poultry products. Outputs: A 5 day training will take place in each of the 10 states (50 training days total) and will be given to 2 livestock extension workers (2 per state for a total 20 people) and county CAHW workers (2 per county for a total of 158 people). County CAHW workers will attend the training that is located in their state. The technical training will take place in the 2nd 6 months of the 2nd year of the project. These state and county workers would then be expected as part of their normal job duties to provide technical assistance to poultry farmers (or potential poultry farmers). The technical training team will consist of the following individuals: 1 international consultant (poultry production specialist) 2 MLFI Animal Production officers</p> <p>Component 4: Business facilitation and international linkages Activity 4.1: A team of poultry and agribusiness specialists will identify potential commercial poultry and egg production investors from existing cooperatives. Outputs: This team will work with potential investors on setting up commercial broiler chicken and egg production private enterprises. The team will also assist in providing linkages to financial service organizations, local farm stores, feed mills, international poultry equipment companies, and international poultry production companies such as Cobb Africa. This phase of the project would be expected to take a minimum of 2 years and would occur starting the 3rd year of the project. The team of poultry and agribusiness specialists will consist of: 1 international agribusiness consultant (commercial poultry industry background) 1 international poultry technical consultant 2 MLFI Animal Production officers 2 MLFI Agribusiness officers/specialists</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<p>Extension workers to provide unbiased up to date technical information. Poultry industry input providers to provide quality inputs and technical information. Agribusiness service providers that will assist with access to finance, profitable business-production models. International consultants: • 1 international agribusiness consultant • 1 international assessment/survey consultant • 1 international cooperative development consultant • 1 international poultry production consultant Public sector staff: • 2 MLFI Animal Production officers • 2 MLFI Agribusiness officers • 20 state livestock extension workers • 158 county CAHW workers</p>
(2) Description of beneficiaries within the framework of the project:	<p>Household poultry producers (especially women in households who normally care for the chickens) will be the primary beneficiaries. Secondary beneficiaries would be commercial broiler chicken and egg producers. Consumers of South Sudan will benefit by having access to local quality poultry meat and eggs.</p>

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<p>A simple poultry industry developed to provide meat and eggs to the local market. The program will address food security, human health, livelihoods and gender. The impact will be better health and a growth in GDP.</p>
(2) EIRR and/or FIRR, and/or other economic analysis	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td> Negative: d Positive: d </td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: d Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: d Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		

Items	Information					
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> Negative impact on the environment. The development of the poultry industry will have a negative impact on the environment, however, mitigation plans are available to address air pollution, waste disposal, water treatment, and other negative influences as a result of the increased size of the industry. <p>(Positive)</p> <ul style="list-style-type: none"> Household poultry production provides an excellent positive impact for women to provide a source of income by selling chickens and eggs in the local market and to help increase food security. 					
2.6 Monitoring and evaluation for impact measurement						
(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> No formalized interest groups No registered cooperatives No poultry producers receiving proper technical training 					
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> Number of formalized interest groups Number of registered cooperatives Number of poultry producers trained 					
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> Registered cooperatives Registered interest groups Training attendance sheets Annual reports from state livestock extension workers and county CAHW workers 					
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> Directorate of Animal Production and Range Management; Directorate of Livestock and Fisheries Extension; Directorate of Veterinary Services 					
2.7 Required human resources						
(1) Principle of human resources management:	<ul style="list-style-type: none"> Capacity development of the poultry supply chain actors Capacity development of the extension specialists The enabling environment is improved 					
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> 2 MLFI Animal Production officers 2 MLFI Agribusiness officers 20 state livestock extension workers 158 county CAHW workers 					
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<ul style="list-style-type: none"> 1 international agribusiness consultant (1 year assignment followed by a second 6 month assignment) 1 international assessment/survey consultant (6 month assignment) 1 international cooperative development consultant (1 year assignment) 1 international poultry production consultant (2 year assignment) 					
2.8 Risk assessment with respect to project objectives and resources to be applied						
(1) Expected level of risk:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">M</td> <td style="text-align: center;">L: Low</td> <td style="text-align: center;">M: Medium</td> <td style="text-align: center;">H: High</td> <td style="text-align: right;">(select an indicator from the list)</td> </tr> </table>	M	L: Low	M: Medium	H: High	(select an indicator from the list)
M	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	<p>The risk is assumed to be medium. This assessment is based off the overall structure of the proposed industry, the various entities involved with production, interaction with government officials and other enabling environment conditions. The project is complex in nature and is dependent upon cooperation of several different entities.</p>					
2.9 Other special considerations and/or notes						
(1) Other special considerations and/or notes:	<p>The program is designed to be a technical assistance program that focuses on training. The program is not designed to provide subsidies but is focused on developing the skill sets for profitable and sustainable delivery of poultry and eggs (protein) to the consumers of South Sudan.</p>					
2.10 Routine operation and required resources after the completion of the project						
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>Human resources on-going:</p> <ul style="list-style-type: none"> 2 MLFI Animal Production officers 2 MLFI Agribusiness officers 20 state livestock extension workers 158 county CAHW workers <p>Other on-going expenses:</p> <ul style="list-style-type: none"> Communication allowance (cell phone and internet for each employee). Laptop computer for each employee Transportation allowances 					

Part 3: Project cost estimation

Project duration	SSP/USD = 4												Total															
	Cost group																											
	Phase 1			Phase 2			Phase 3			Phase 4				% to														
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000	total	
1 Management and operation of project																												
1 Deployment of government staff																												
1 Assessment survey (per diem)						1,493	1,178	273	273	10	10	10	10	10	10												3,276	
2 Assessment survey (per diem)						137	113																					250
3 Cooperative development trip (per diem)						36																						32
4 Cooperative development trip (transportation)						36																						36
5 Technical training (per diem)						36																						65
6 Technical training (transportation)						27																						72
7 Technical training (transportation)						18																						27
8 Technical training (transportation)																												18
2 Procurement of administrative services (contracted)																												
3 Procurement of professional services (contracted)																												
1 International consultant (assessment / survey)						1,350	810	270	270																			2,700
2 International consultant (cooperative development)						540																						540
3 International consultant (poultry production)						270	270																					540
4 International consultant (agri-business)						540	540																					1,080
4 Implementation of staff training																												
1 Technical training (per diem)						252																						252
2 Technical training (transportation)						222																						222
3 Technical training (transportation)						30																						30
5 Implementation of research, studies and surveys																												
6 Delivery of extension and training services to the private sector																												
7 Operation and maintenance																												
1 Fuels for assessment survey						6	3	3	3	10	10	10	10	10	10													74
2 Fuels for cooperative development						3																						3
3 Fuels for facilitation						3																						6
4 Fuels, consumables for monitoring, follow up																												6
5 Fuels, consumables for monitoring, follow up																												60
2 Construction of infrastructure and procurement of equipment																												
1 Construction of office buildings																												
2 Construction of research, training and other specialized buildings																												
3 Construction of feeder roads																												
4 Construction of production, market and transportation facilities																												
5 Acquisition of land																												
6 Procurement of vehicles																												
7 Procurement of equipment																												
3 Subsidies, equity and loans																												
1 Provision of cash and/or in-kind subsidies																												
2 Provision of training services to the private sector																												
1 Poultry cooperative development training (per diem)						495	495																					990
2 Poultry cooperative development training (transportation)						405	405																					810
3 Equity investments																												
1 Poultry cooperative development training (transportation)						90	90																					180
4 Provision of loans																												
5 Social assistance/donation (Emergency)																												
Total (SSP '000)						1,988	1,673	273	273	10	10	10	10	10	10													4,266
Total (USD '000)						497	418	68	68	3	3	3	3	3	3													1,067
% to total						47%	39%	6%	6%	0%	0%	0%	0%	0%	0%													100%

Public sector project
Routine work by government
Private sector project
Routine work by private sector

3.4.22 Enhancement of demonstration farms project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Livestock		
(2) Project name:	Enhancement of demonstration farms project		
(3) Project ID:	0 2 . 2 2 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2025/26	Ending FY: 2034/35	Duration (years): 10
(5) Total investment:	SSP 12,453,000	USD 3,113,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		LS.SA2	Public sector institution and management capacity development	Table 2-3
(2) Government organisation:	05	MLFI-AP	Directorate of Animal Production and Range Management	Table 2-6
	08	MLFI-EX	Directorate of Livestock and Fisheries Extension	Table 2-6
(3) Activity types:	204	SP-RE	Service delivery and infrastructure development- Research and experiment	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	X
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	
	73	UT	Unity State	
	81	WA	Warrap State	
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	
	91	WE	Western Equatoria State	
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	
	02	PH2	Phase II (2020/21-2024/25, 5 years)	
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	X
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income		

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

Agriculture producers are characterized as being risk adverse. The reasons are plentiful but one driving factor is their slowness to change. Agriculture producers are more likely to change if they can see first-hand that new technologies work. One of the best ways to show agriculture producers this change is through demonstration farms. Over time it has been found that demonstration farms can have a beneficial outcome for promoting livestock. Moreover, demonstration farms are excellent sites for controlled practical research programs to increase production and productivity.

During the 1970's in the former Sudan (Southern Sudan area) there existed demonstration farms that carried on active successful programs. According to the CAMP situation analysis report (2013), key objectives of the model farms were to combine demonstration and multiplication of improved livestock supported by limited research on breed improvement. In the pre-independence period, the public sector was heavily involved in direct production with demonstration farms supplying livestock and livestock products. There were 5 successful demonstration farms during this period of pre-independence. As with the rest of the country these demonstration farms were destroyed during the long civil war.

The following excerpt was referenced from the CAMP Technical Annex 1 of the Situation Analysis Report, December, 2013:

The Ministry of Animal Resources and Fisheries (MARF) Policy Framework and Strategic Plan 2012-2016 (PFSP) has put an emphasis on demonstration farms, which were envisioned as the main strategy for achieving the key targets of increasing milk production by 25% by the end of 2015, increasing the supply of poultry meat and eggs by 30% by the end of 2016, and improving the quality of hides and skins for both local and international markets. The model farms are therefore allocated 31% of the total MARF PFSP budget over 2012-2016, equivalent to 82% of the Directorate of Animal Production and Range Management, which has the largest share of the PFSP budget, i.e., 39%. The PFSP pursues a regional approach, shifting away from the earlier plans to establish a model farm in each state: Marial Bai Dairy Farm and Wau Poultry Farm for the Greater Bahr el Ghazal region; Malakal Poultry Farm and Malakal Dairy Farm for the Greater Upper Nile region, and Central Equatoria Dairy Farm and Central Equatoria Poultry Farm. Despite the large planned investment, there is no strategic plan to guide the development of the model farms. Key mandates of the model farms and the extent of public sector involvement are not clearly defined.

The title of this project emphasizes "Enhancement" instead of "Development" because for the most part an initial demonstration farm plan has been developed by (Ministry of Livestock and Fisheries Industry) MLFI. The primary goal of this project would be to utilize the funding already allocated for rehabilitating these demonstration farms and move forward with implementing these funds. Public and private partnerships should be pursued when rehabilitating these farms. For example the private sector could donate various breeds of cattle, sheep, goats, poultry, etc. to the farms for practical research or to demonstrate various production improvements such as nutrition or crossbreeding.

(2) Objectives:

To implement 6 demonstration farms in the regional locations/sites already chosen by MLFI.

(3) Overall description including temporal and spatial extent of project:

The goal is to implement funding already reserved for 6 demonstration farms in selected regional sites of South Sudan. These demonstration farms will be beneficial in demonstrating new methods, systems, technologies, breeds, feeds, grasses and other items used to increase or benefit livestock and poultry production. This project provides excellent linkages with the crop and forestry industries. Demonstration plots containing improved crops and important trees for forestry can be implemented on the farms.

(4) Component structure:

Component 1: Assessment
Component 2: Site reconstruction and remodelling
Component 3: Training and Program Development
Component 4: Maintaining Program

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

Component 1: Assessment
Activity 1.1: Assess the following selected regional locations for current suitability and conditions:
Marial Bai Dairy Farm (Greater Bahr el Ghazal region)
Wau Poultry Farm (Greater Bahr el Ghazal region)
Malakal Poultry Farm (Upper Nile region)
Malakal Dairy Farm (Upper Nile region)
Central Equatoria Dairy Farm
Central Equatoria Poultry Farm

Items	Information
	<p>Outputs: Location assessment published and submitted for bidding process to take place.</p> <p>Activity 1.2: Develop a survey instrument to be used to collect primary needs data from livestock producers, traders, input dealers and association members from each region. Although the final decision on the number surveyed will be up to the implementer it is recommended that a cross section of producers in size and location be used.</p> <p>Outputs: Survey results compiled, analysed, and a report prepared. Report provided to MLFI and oversight committee to prioritize research areas.</p> <p>Component 2: Site reconstruction and remodelling</p> <p>Activity 2.1: Create a transparent bidding process for remodelling of existing facilities and procuring equipment.</p> <p>Activity 2.2: Select appropriate contractors and award 2 separate contracts with the first contract for the actual construction work done for remodelling and a second contract for a provider to equip the farms. Equipment would include at least one vehicle per farm for transport of staff and at least one large truck per farm for general farm work. Equipment such as computers, generators, refrigerators and office equipment will also be needed.</p> <p>Activity 2.3: Stock the farm based on survey/needs assessment completed by livestock industry participants.</p> <p>Outputs for 2.1, 2.2, 2.3: The following building structures and land area would need to be supplied for each farm (6 farms):</p> <ul style="list-style-type: none"> Main building that will include offices, classrooms, restrooms 278 sq. meters= \$52,440 USD Land for each farm (20 hectares/farm) Land should be free (government owned) Machine shed 278 sq. meters= \$12,889 USD Feed silos (2 for each farm) 2.74 m diameter x 3.96m height= \$3,730 USD (each) Feeder barn/shelter (cattle)= 278 square meters (\$18,600) Feeder barn/shelter (sheep)= 185 square meters (\$13,160) Feeder barn/shelter (goats)= 185 square meters (\$13,160) Broiler chicken house= 185 square meters (\$22,200) Fencing for livestock (steel pipe fencing for corrals)= 609 meters x 9/m=\$23,774 95 PTO hp Tractor with front end loader= \$60,000 USD Large pick-up truck= \$30,000 <p>Component 3: Ownership, training and program development.</p> <p>Activity 3.1: Memorandum of Understanding between National and State Government as to ownership and operational responsibility. It is recommended that the actual facilities are owned by the government and staff paid by the government. Livestock and poultry for stocking the farms would come from private industry.</p> <p>Activity 3.2: Train demonstration farm staff with standardized technical training.</p> <p>Outputs: Training schedule:</p> <ul style="list-style-type: none"> 84 workers trained for 14 days in Juba (first year). 84 workers attend annual conference in Juba annually. 6 farm managers attend training courses in Europe or United States for 6 months. <p>Component 4: Maintaining Program</p> <p>Activity 4.1: Create an oversight committee made up of government officers, university faculty, and private industry producers to develop short and long term activities.</p> <p>Activity 4.2: Quarterly meetings held by 75% or more of oversight committee to develop short and long term activities.</p> <p>Outputs: 15 members of oversight committee hold a 2 day meeting quarterly in Juba (8 days total per year).</p> <p>Activity 4.3: Annual Field Day held to showcase to the public successes of the farm.</p> <p>Outputs: Field day schedule as follows:</p> <ul style="list-style-type: none"> Marial Bai Dairy Farm (Greater Bahr el Ghazal region) will hold a 3 day annual field day with approximate attendance of 300 people from the community. Wau Poultry Farm (Greater Bahr el Ghazal region) will hold a 3 day annual field day with approximate attendance of 300 people from the community. Malakal Poultry Farm (Upper Nile region) will hold a 3 day annual field day with approximate attendance of 300 people from the community. Malakal Dairy Farm (Upper Nile region) will hold a 3 day annual field day with approximate attendance of 300 people from the community. <ul style="list-style-type: none"> • Central Equatoria Dairy Farm will hold a 3 day annual field day with approximate

Items	Information
	attendance of 300 people from the community. • Central Equatoria Poultry Farm will hold a 3 day annual field day with approximate attendance of 300 people from the community.

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<p>Skilled and unskilled labour for construction and operation. Graduates of university for managers of units who need to understand the principles of research and proper implementation.</p> <p>Supervisors are needed to manage the various workers and specialized groups. A steering committee composed of government officers, local producers, research staff from university and supply chain representatives.</p> <p>If there will be 6 demonstration farms the following positions will be needed:</p> <ul style="list-style-type: none"> • 6 farm managers (1 per farm) • 18 skilled workers (3 per farm) • 60 unskilled workers (10 per farm) <p>Farm managers must have demonstrated experience (minimum of 10 years) in managing agricultural operations. Skilled workers will be university graduates with background and experience in one of or a number of the following areas: animal science, rangeland science, animal health, agriculture business management.</p>
(2) Description of beneficiaries within the framework of the project:	<p>Primary beneficiaries are livestock producers who will benefit since there will be a place to have new methods, systems and technologies demonstrated.</p> <p>Secondary beneficiaries are the livestock and poultry industry as a whole. They will benefit with the acceptance of new methods which will lead to increased production and in turn an increase in GDP</p>

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	A quantified number of demonstration farms (possibly 6) which will lead to industry growth, improved efficient and an increase in GDP.
(2) EIRR and/or FIRR, and/or other economic analysis	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative or positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: d</td> <td rowspan="2">Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society</td> </tr> <tr> <td>Positive: d</td> </tr> </table>	Negative: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society	Positive: d
Negative: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society			
Positive: d				
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • The remodelling and maintaining of the demonstration farms will have a significant negative impact on the environment due to animal waste but mitigation plans will be developed to minimize all negative concerns including waste disposal and water protection. <p>(Positive)</p> <ul style="list-style-type: none"> • Livestock producers learn best when they can actually see positive results from new technology. Demonstration farms provide these tangible results that producers can replicate on their own farms. 			

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	• No functioning demonstration farm facilities.
(2) Measurable indicators and situation at the end point:	• Number of functional demonstration facilities.
(3) Methods of measurement and sources of information:	• Photos, registered facilities with local authorities, review by Directorate of Planning.
(4) Responsible parties for the monitoring and evaluation:	• Directorate of Animal production and Range Management; Directorate of Livestock and Fisheries Extension

2.7 Required human resources

(1) Principle of human resources management:	<p>Skilled and unskilled labour for construction and operation. Graduates of university for managers of units that need to understand the principles of research and proper implementation.</p> <p>Supervisors are needed to manage the various workers and specialized groups. A steering committee composed of government officers, local producers, research staff from university and supply chain representatives.</p>
(2) Required human resources in the public sector (Positions, grades and numbers):	<p>If there will be 6 demonstration farms the following positions will be needed:</p> <ul style="list-style-type: none"> • 6 farm managers (1 per farm) • 18 skilled workers (3 per farm) • 60 unskilled workers (10 per farm)

Items	Information
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Farm managers must have demonstrated experience (minimum of 10 years) in managing agricultural operations.</p> <p>Skilled workers will be university graduates with background and experience in one of or a number of the following areas: animal science, rangeland science, animal health, agriculture business management.</p> <ul style="list-style-type: none"> • 1 international consultant (experience in agricultural demonstration farms or experimental stations). 1 year assignment. • 1 international consultant (livestock specialist). 1 year assignment. • 1 international consultant (poultry specialist). 1 year assignment.

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	<table border="1" style="width: 100%;"> <tr> <td style="text-align: center;">H</td> <td style="text-align: center;">L: Low</td> <td style="text-align: center;">M: Medium</td> <td style="text-align: center;">H: High</td> <td style="text-align: right;">(select an indicator from the list)</td> </tr> </table>	H	L: Low	M: Medium	H: High	(select an indicator from the list)
H	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	<p>The risk associated with this project is high based on the complexity of the stakeholders and activities involved. There must be a MOU developed. Decisions about location have the potential to become a political debate. Construction of facilities that are practical and cost effective. Is open to political or monetary interference.</p>					

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	<p>Each demonstration centre will require livestock and poultry. It may be possible to have producers donate animals for the initial stocking. This would reduce some initial costs and demonstrate the importance of the private sector in the process.</p> <p>One consideration is to review the Demonstration and Training Centre structure in Honduras referred to as Zamorano. This is an excellent site that functions to train professionals for agriculture as well as demonstrating technology and systems to local producers.</p>
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>The cost of maintaining a livestock and poultry demonstration unit is expensive. Some costs can be captured by selling animals and/or animal products to the public. This allows some recovery of the yearly expenditures. National and State governments in partnership with the private sector have to be committed to funding these farms with the necessary funding after taking into account the costs of selling animals.</p> <p>If there will be 6 demonstration farms the following ongoing positions will be needed:</p> <ul style="list-style-type: none"> • 6 farm managers (1 per farm) • 18 skilled workers, university trained graduates (3 per farm) • 60 unskilled workers (10 per farm) <p>Furthermore there will be ongoing maintenance costs in the areas of:</p> <ul style="list-style-type: none"> • Buildings and animal pens • Computer equipment • General office equipment • Vehicles (needed for farm work and staff transportation) • Feed for animals • Animal health supplies and medicines • Communication allowances (phone and internet)
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02.22 Enhancement of demonstration farms project (cont.)

SSP/USD = 4

Project duration	Phase 1					Phase 2					Phase 3					Phase 4					Total						
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000	% to total
1 Annual field day for demonstration																											
3 Equity investments																											
4 Provision of loans																											
5 Social assistance/donation (Emergency)																											
T total (SSP '000)										10,671	6	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222	12,453
T total (USD '000)										2,668	2	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	3,113
% to total										86%	0%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	100%

Public sector project
Routine work by government
Private sector project
Routine work by private sector

3.4.23 Enhancement of livestock producer associations project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Livestock		
(2) Project name:	Enhancement of livestock producer associations project		
(3) Project ID:	0 2 2 3 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2019/20	Ending FY: 2024/25	Duration (years): 6
(5) Total investment:	SSP 626,000	USD 156,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		LS.SA7	Private sector organisation and market enhancement	Table 2-3
(2) Government organisation:	08	MLFI-EX	Directorate of Livestock and Fisheries Extension	Table 2-6
	05	MLFI-VS	Directorate of Animal Production and Range Management	Table 2-6
(3) Activity types:	203	SP-EX	Service delivery and infrastructure development- Extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection	
(1) Development theme:	01	RR	Reconstruction and recovery		
	02	FS	Food and nutrition security		
	03	EG	Economic growth and livelihood improvement		
	04	AT	Agriculture sector transformation	X	
	05	ID	Institutional development		
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management		
	02	CAADP-P2	Pillar 2: Market access		
	03	CAADP-P3	Pillar 3: Food supply and hunger	X	
	04	CAADP-P4	Pillar 4: Agricultural research		
(3) State:	71	UN	Upper Nile State	X	
	72	JG	Jonglei State	X	
	73	UT	Unity State	X	
	81	WA	Warrap State	X	
	82	NB	Northern Bahr el Ghazal State	X	
	83	WB	Western Bahr el Ghazal State	X	
	84	LK	Lakes State	X	
	91	WE	Western Equatoria State	X	
	92	CE	Central Equatoria State	X	
	93	EE	Eastern Equatoria State	X	
	(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
		02	MT	Medium-term (5 to 10 years)	X
		03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X	
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X	
	03	PH3	Phase III (2025/26-2029/30, 5 years)		
	04	PH4	Phase IV (2030/31-2039/40, 10 years)		
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X	
	02	GBT	Greenbelt	X	
	03	HAM	Hills and Mountains	X	
	04	ISP	Ironstone Plateau	X	
	05	NSR	Nile-Sobat Rivers	X	
	06	PTL	Pastoral	X	
	07	WFP	Western Flood Plains	X	
(7) Ownership:	01	NP	National project		
	02	NS	National-State project	X	
	03	SP	State project		
	04	SC	State-County project		
	05	PP	Public-Private Partnership project		
	06	PS	Private sector project		
(8) Funding sources:	11	NBF	National government budget/development fund	X	
	12	NLE	National government loans and equity financing		
	21	SBF	State government budget/development fund	X	
	22	SLE	State government loans and equity financing		
	31	DPG	Development partners grant	X	
	32	DPL	Development partners loans and equity financing		
	41	PSI	Private sector Investment		
	51	NGG	NGO grant		
	52	NGL	NGO loans and equity financing		
61	FGI	Financed by generated income			

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:	<p>Agriculture including farming, forestry, fisheries and livestock is the main source of employment and income in rural areas, where most of the world's poor and hungry people live. "Agricultural organizations" is a broad term that can include the following: farmers' unions, farmers' cooperatives, farmer groups, commodity associations, and rural finance institutions. For simplicity, the term producer association will be used as the defining phrase for this project profile unless otherwise specified. Producer associations play an important role in supporting small agricultural producers and marginalized groups such as young people and women. They empower their members economically and socially, and create sustainable rural employment through business models that are resilient to economic and environmental shocks. Associations offer small agricultural producers opportunities and a wide range of services, including improved access to markets, natural resources (i.e. water and grazing cooperatives), information, communications, technologies, credit, training and warehouses. They also facilitate smallholder producer participation in the following areas:</p> <ul style="list-style-type: none"> • decision-making at all levels • support them in securing land-use rights • negotiate better terms for engagement in contract farming • lower prices for agricultural inputs such as veterinary drugs, feed and equipment. <p>Through this support, smallholder producers can secure their livelihoods and play a greater role in meeting the growing demand for food on local, national and international markets, thus contributing to poverty alleviation, food security and the eradication of hunger. Through extensive literature research and consultation with the CAMP Livestock Technical Team there are no officially organized associations in the livestock industry in South Sudan. Years of civil war and the current on-going conflict has led to a reluctance to cooperate by producer groups. Furthermore, there is no Ministry of Agriculture (MLFI) Directorate responsible for the registration, monitoring, and training of producer associations in the livestock industry.</p>
(2) Objectives:	<p>The objective is to create major association networks that will connect national, state, county, and local individuals. MLFI will designate a Directorate to oversee the registration, monitoring, training, and on-going technical assistance to officially organized livestock producer associations. These official associations can then advocate and properly represent livestock, poultry, and bee producers economically and socially to government and other interested entities to enhance food security and economic growth.</p>
(3) Overall description including temporal and spatial extent of project:	<p>Livestock producer associations are outlined in other CAMP project profile sheets such as dairy, poultry, beekeeping, meat, and water associations. Each of these project profiles outlines the creation and training of specific associations. This project profile will outline the development of a MLFI Directorate that will be responsible for the recognition, registration, monitoring, training, and on-going technical assistance of these many producer associations. This MLFI entity will help create linkages on the national, state, county, and local levels. Another goal is to rapidly communicate that the government is interested in the success of these interest groups and that they are an important part of peace and food security. It is worth noting that this association entity within MLFI can also provide oversight to fishery and veterinary associations. This project can also aid in helping to receive support from donor agencies and NGO's.</p>
(4) Component structure:	<p>Component 1: Formation of a producer association office within MLFI.</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1: Formation of a producer association office within MLFI.</p> <p>Activity 1.1: Development of a livestock producer association unit within the Directorate of Animal Production and Range Management of MLFI. Staff would be hired and trained to serve in the capacity of registering, monitoring, training, and provide on-going technical assistance to livestock producer associations.</p> <p>Outputs: The following staff would be hired for the livestock producer association unit:</p> <ul style="list-style-type: none"> 1 senior level unit director 3 junior level association specialists 2 mid-level administrative assistants <p>In order for a producer association to become official they would need to fill out an application form to the MLFI association unit office and provide documentation such as:</p> <ul style="list-style-type: none"> Official name of the association and association by-laws Association rules Association officers Complete list and contact information of each association member Mission statement of the association (what are their prime objectives and goals for forming this association). <p>The application form would be reviewed by the MLFI association office and then</p>
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Items	Information
	<p>officially registered. It is expected that each association will pay an affordable fee to become officially registered. The association will be notified of their official recognition and then will be entered in a central database within the MLFI association office. MLFI association office staff will create a series of Fact Sheets that can be distributed to potential and existing producer associations. The Fact Sheets would cover areas such as election of officers, enhancement of by-laws, marketing tools, and important private sector industry contact information.</p> <p>Activity 1.2: Training of MLFI association unit staff Outputs: 1 international association development consultant would be “embedded” within the newly formed MLFI association unit for a period of 6 months. This consultant would provide on-going training and technical assistance to the staff within the unit. The consultant would also work with the staff to create training curriculum that can be used for future producer association training. MLFI staff would then be available to provide state and county training to specific producer associations. This training would be 3 days in duration and would need to be requested from state or county livestock extension workers or CAHW workers. This would help create a link between the extension system, producer associations, and national MLFI association unit.</p> <p>Activity 1.3: The MLFI association unit will provide on-going monitoring and technical assistance for registered producer groups. Outputs: MLFI association staff would be responsible for on-going updating of the national producer association database. The database files would be divided into major producer association networks such as: meat, dairy, poultry, water, feed, beekeeping, cattle, sheep, goats, swine, grazing, and fish. MLFI staff would also assist registered producer associations by providing key contact information and linkages with private sector vendors and markets on a national, state, and county level.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	MLFI producer association staff working to provide technical assistance and oversight to livestock producer associations throughout South Sudan. Assistance from international association specialists will also be utilized.
(2) Description of beneficiaries within the framework of the project:	The primary beneficiaries are the producers.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	Registered and nationally recognized producer associations that have the ability to officially represent the industry and advocate for changes. These functional associations can act as buying units and potentially reduce the cost of inputs while working together to reduce marketing costs.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: a Positive: d</td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: a Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: a Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • There are no negative impacts on the environment or society due to this project. <p>(Positive)</p> <ul style="list-style-type: none"> • This project will have a significant positive impact on society. Women will have the opportunity to form their own associations if desired to help market their products. In general this will be positive for all the livestock industry. Associations will officially be able to represent the industry and advocate for changes. These functional associations can act as buying units and potentially reduce the cost of inputs while working together to reduce marketing costs. 		

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • No known livestock producer associations in South Sudan • No known unit within MLFI to assist in the registration and monitoring of producer associations
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • Number of formed and officially registered producer associations • Producer association unit developed and staffed with the Directorate of Animal Production at MLFI
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> • Official registrations entered into central database
(4) Responsible parties for the	<ul style="list-style-type: none"> • Directorate of Animal Production and Range Management

Items	Information					
monitoring and evaluation:						
2.7 Required human resources						
(1) Principle of human resources management:	<ul style="list-style-type: none"> • An international association development consultant will be needed to train new MLFI association unit staff. • MLFI association unit staff will provide on-going technical assistance to the livestock producer associations of South Sudan. 					
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> • 1 senior level unit director • 3 junior level association specialists • 2 mid-level administrative assistants 					
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<ul style="list-style-type: none"> • 1 international association development consultant. 6 month assignment. 					
2.8 Risk assessment with respect to project objectives and resources to be applied						
(1) Expected level of risk:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center; width: 10%;">L</td> <td style="text-align: center; width: 10%;">L: Low</td> <td style="text-align: center; width: 10%;">M: Medium</td> <td style="text-align: center; width: 10%;">H: High</td> <td style="text-align: center; width: 50%;">(select an indicator from the list)</td> </tr> </table>	L	L: Low	M: Medium	H: High	(select an indicator from the list)
L	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	<p>The risk associated with this activity is low. It is primarily a social activity that focuses on developing the social strength and integrity of the people. Very little if any monetary funds are needed for interest groups to form into associations.</p>					
2.9 Other special considerations and/or notes						
(1) Other special considerations and/or notes:	None					
2.10 Routine operation and required resources after the completion of the project						
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>Human resources on-going:</p> <ul style="list-style-type: none"> • 1 senior level unit director • 3 junior level association specialists • 2 mid-level administrative assistants <p>Other expenses on-going for MLFI association office staff:</p> <ul style="list-style-type: none"> • Communication allowances (cell phones and internet) • Computers • Travel and training budget (annual) to allow MLFI specialists to travel to regions upon invitation to present training seminars to producer associations. These costs could be offset by having the producer association pay for travel and lodging of MLFI staff. • Office maintenance and supplies 					

3.4.24 Rangeland management project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Livestock		
(2) Project name:	Rangeland management project		
(3) Project ID:	0 2 . 2 4 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2025/26	Ending FY: 2034/35	Duration (years): 10
(5) Total investment:	SSP 5,885,000	USD 1,471,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		LS.SA3	Public infrastructure development	Table 2-3
(2) Government organisation:	05	MLFI-AP	Directorate of Animal Production and Range Management	Table 2-6
	02	MLFI-SC	Directorate of State Coordination and Special Project	Table 2-6
(3) Activity types:	209	SP-EI	SD/ID Economic infrastructure development	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	X
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	X
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	X
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>Range Management is a distinct discipline founded on ecological principles and dealing with the use of rangelands and range resources for a variety of purposes. These purposes include use as watersheds, wildlife habitat, grazing by livestock, and even recreation. Developing a plan for using rangeland resources requires information about the productive capability of the rangelands, current condition, intended use, and land owner objectives.</p> <p>When developing a plan for the rangeland resources, first consideration must be given to management of the vegetation resource through the use of a prescribed grazing system. The prescription should take into account periods of grazing, rest, animal impact, and levels of use that will bring about desired changes in the plant community.</p> <p>The second consideration in developing a plan is identifying those practices necessary to implement the desired prescribed grazing system. These practices help control or influence the movement of livestock necessary for uniform distribution of grazing. These practices may include water developments, fencing, salting, stock trails, and herding.</p> <p>When the vegetation management resulting from the prescribed grazing does not achieve the desired changes in the plant community within a reasonable length of time, one or more supplementary practices may need to be planned and applied to help accelerate the desired change. These practices often result in dramatic changes in the plant community and should be carefully planned and applied, with special follow-up management to insure they are effective and achieve the desired change. Some of the practices to consider are seeding, brush management, prescribed burning, fertilizing, mechanical treatment, and water spreading. There are areas that may require special consideration in developing management plans. This may include areas of sensitive soils, unique plants, riparian areas, adjacent land uses, recreation and historical sites.</p> <p>Rangelands provide about 70-80 percent of feed resources for both domestic animals and wildlife in South Sudan. To sustain productivity of these resources and enhance livestock production, careful grazing management and monitoring systems need to be implemented. In South Sudan, promotion of sustainable utilization of grazing land resources has been very challenging and is more likely to continue to degrade due to limited information about existing rangelands and inadequate human resource capacity to promote rational utilization of existing range resources. For long term progress in livestock production and range development a better understanding of the current rangeland conditions and performance is needed. Information is needed concerning grass species, forb (or flowering plant used as forage) and brush species, propagation, fertilization, root structure, production cycles and other general plant characteristics prior to making any recommendations.</p>
(2) Objectives:	<ul style="list-style-type: none"> • To promote optimum utilization of rangeland in South Sudan. • To improve nutrition and promote better health of livestock. • To assess the effect of the protracted war and other disasters on the eco-system. • To carryout range trials and research improved varieties of forage species. . • To train local personnel on range management techniques.
(3) Overall description including temporal and spatial extent of project:	<p>A comprehensive assessment of the current conditions of rangeland in South Sudan is a critical first step to this project. Once an assessment has been made then the most damaged areas of rangeland need to be identified and plans developed for rehabilitation. Rangeland in South Sudan is vast, covering millions of hectares. Complete rehabilitation is not realistic and will be cost prohibitive. However, those areas where livestock grazing consistently occurs should take priority on rehabilitation and management. Also receiving special priority are steps to improve the supply of water and reduce degradation of riparian areas (land bordering water). The construction of water catchments is presented in a separate project profile sheet within the CAMP project. For rehabilitation and management of rangelands to take place, government and extension staff assigned as range specialists will need to be trained by international consultants. These government and extension staff would then be expected to provide on-going training and technical assistance to pastoralists and livestock producers. In addition to training, and at later phases of the project, research trials can take place at either livestock research centres or demonstration farms to identify the viability of improved range grasses, forbs, and shrubs. The research aspect of improved forage is outlined in a separate CAMP project profile sheet. For those areas of rangeland that have been rehabilitated, continued monitoring needs to take place to insure proper long term sustainability.</p>
(4) Component structure:	<p>Component 1: Rangeland assessment Component 2: Rangeland rehabilitation efforts Component 3: Training Component 4: Monitoring</p>

Items	Information
2.2 Detailed description of project component, activity and outputs	
(1) Component, activity and outputs:	<p>Component 1: Rangeland assessment</p> <p>Activity 1.1: A team consisting of international and national specialists will conduct an in-depth assessment of current rangeland conditions across South Sudan.</p> <p>Outputs: An assessment team will consist of the following specialists:</p> <ul style="list-style-type: none"> 1 international rangeland consultant 1 international GIS mapping consultant 1 MLFI GIS mapping specialist 2 MLFI range specialists 2 MLFI livestock extension specialists 10 state range officers (1 per state) <p>For a period of no less than 1 year this assessment team will travel throughout South Sudan measuring the current status of rangeland. They will look at quantity and type of grasses, forbs, shrubs, water features, riparian areas, seasonality of feeds, flooding issues, migratory routes, grazing patterns (of both domestic livestock and wildlife), and in their assessment will identify the most degraded rangeland in each state that will be marked as a priority for a pilot rehabilitation program. The published assessment will be shared with all stakeholders.</p> <p>Component 2: Rangeland rehabilitation efforts</p> <p>Activity 2.1: A rehabilitation team consisting of international, national, state, and county specialists will conduct pilot rehabilitation projects in each state. This will include fencing off riparian areas, re-distributing grazing patterns to improve plant recovery and growth, fertilization, removal of invasive grasses and brush through mechanical means (machinery such as bulldozers), marking migratory routes so that livestock migration has minimal impact on the environment, and implementation of transects (line transects are used when you wish to illustrate a particular gradient or linear pattern along which communities of plants and, or animals change for each pilot site).</p> <p>Outputs: Pilot sites are recommended for each state. Each pilot site would consist of approximately 100 hectares. Range rehabilitation is expensive so approximately \$50,000 should be allocated to rehabilitating each pilot site (10 sites x \$50,000USD= \$500,000 total). Costs would include hiring bulldozers for mechanical removal of invasive species, fencing costs on major riparian areas, some fertilization, and creation of inexpensive transects.</p> <p>Component 3: Training</p> <p>Activity 3.1: A training team consisting of international and national specialists will provide in-depth training to all state range officers. Training subjects will include: creating and monitoring transects, grass/forb/brush specie identification, upkeep of water catchment areas and riparian areas, general animal science training, grazing management techniques, and range rehabilitation best practices.</p> <p>Outputs: The training team will consist of the following:</p> <ul style="list-style-type: none"> 1 international rangeland consultant 2 MLFI range specialists 2 MLFI livestock extension specialists <p>Training will take place for 3 weeks (5 days per week). 2 weeks will be spent in the field and 1 week in a classroom setting in Juba. Attendees would include 20 state range conservation officers and at least 10 livestock extension workers (1 per state). Total attendees would be 30 people.</p> <p>Component 4: Monitoring</p> <p>Activity 4.1: Continued monitoring of rangelands by state range conservation officers is essential to long term sustainability. These officers will need to continually monitor transects to determine improvement of native plant species, whether overgrazing is taking place, maintenance of water access points, and to prevent degradation of riparian areas.</p> <p>Outputs: 20 state rangeland conservation officers (2 per state) will provide on-going monitoring of the rangelands that fall within their jurisdiction.</p>
2.3 Service providers and beneficiaries	
(1) Description of service providers within the framework of the project:	Primary services providers will be the MLFI Department of Range Management and state range officers.
(2) Description of beneficiaries within the framework of the project:	Primary beneficiaries will be livestock keepers, both pastoralist and sedentary agro-pastoralists
2.4 Outcomes, impact and contributions to value added (i.e. economic growth)	
(1) Outcomes and impact:	Healthy rangelands that are able to provide feed to the millions of livestock in South

Items	Information
(2) EIRR and/or FIRR, and/or other economic analysis:	Sudan, while still conserving the surrounding environment that will sustain plant and wildlife species. (if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: d</td> <td rowspan="2">Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society</td> </tr> <tr> <td>Positive: d</td> </tr> </table>	Negative: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society	Positive: d
Negative: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society			
Positive: d				
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> Livestock grazing if not properly managed can have a significant negative impact on the environment by overgrazing native plant species, degrading riparian areas, and depleting scarce water resources. Proper government oversight and enforcement along with proper producer education are the mitigation factors that can prevent negative impact. Careful consideration should be given when selecting the locations of the pilot projects to avoid areas prone to conflict. <p>(Positive)</p> <ul style="list-style-type: none"> If properly managed rangeland can provide cost free, nutrient rich feed to the livestock of South Sudan. Also wildlife can benefit from rangeland improvement projects. 			

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> No monitoring or improvement rangeland projects in South Sudan
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> Number of monitoring transects placed on rangeland in South Sudan Number of producers trained Annual rangeland reports by state range officers
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> Range transects Attendance sheets Annual reports
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> MLFI Department of Animal Production and Rangeland Development State range officers

2.7 Required human resources

(1) Principle of human resources management:	<ul style="list-style-type: none"> Trained, competent employees in the public sector to manage and monitor the rangelands.
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> 2 senior level MLFI range staff 10 senior level technical staff at the states level (state directors for range management) 10 mid-grade administrative staff (1 for each state) 20 (2 for each state) - conservation officers with enforcement and regulatory authority 1 MLFI GIS mapping specialist 2 MLFI livestock extension specialists
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<ul style="list-style-type: none"> 1 international rangeland consultant. 2 year assignment. 1 international GIS mapping consultant. 1 year assignment.

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk	H L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	The expected risk is high for this project. Risk comes in the form of inadequate funding which would stop progress on rangeland rehabilitation. There is also a risk of conflict between tribes over grazing lands and livestock migratory routes.

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	None
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>Human resources (on-going):</p> <ul style="list-style-type: none"> 2 senior level MLFI range staff 10 senior level technical staff at the states level (state directors for range management) 10 mid-grade administrative staff (1 for each state) 20 (2 for each state) - conservation officers with enforcement and regulatory authority 1 MLFI GIS mapping specialist 2 MLFI livestock extension specialists <p>Other on-going costs:</p> <ul style="list-style-type: none"> Cost of maintaining archives Cost of computers Communication allowances (cell-phones and internet services) Office maintenance
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Items	Information
	<ul style="list-style-type: none">• Transportation (vehicles and fuel) for staff to monitor rangeland quality and enforce grazing allotments

3.4.25 Creation of livestock research centres project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Livestock		
(2) Project name:	Creation of livestock research centres project		
(3) Project ID:	0 2 . 2 5 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2025/26	Ending FY: 2034/35	Duration (years): 10
(5) Total investment:	SSP 8,414,000	USD 2,104,000	Note: Not including recurrent cost

1.2 Project characteristics:

	Code	Abbreviation	Description	Reference
(1) Subsector area:		LS.SA2	Public sector institution and management capacity development	Table 2-3
(2) Government organisation:	09	MLFI-RD	Directorate of Animal and Fisheries Research and Development	Table 2-6
		MLFI- All	All MLFI Directorates	Table 2-6
(3) Activity types:	204	SP-RE	Service delivery and infrastructure development- Research and experiment	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	X
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	X
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	
	73	UT	Unity State	
	81	WA	Warrap State	
	82	NB	Northern Bahr el Ghazal State	
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	
	91	WE	Western Equatoria State	
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income		

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>Research is important for any industry for long term survival. However, research facilities are expensive to build and operate and manage. Without meaningful government and industry input, research facilities can lose function and fail to address industry needs.</p> <p>For long term progress in livestock production, pasture development, and rangeland management, a better understanding of the current native species is needed. Many times poor production is explained as poor genetics when in reality the problem is not poor genetics but a symptom of the environment. For example, reproductive efficiency is said to be low in South Sudan due to the delay in females reaching maturity from 36 to 49 months and the average age at first calving ranges from 44 to 56 months. Some of this delay could be contributed to the genetic nature of the current breeds but studies over the last twenty years have found that much of the delay can be attributed to poor nutrition. Another additional problem is a lack of understanding how to coordinate reproduction with the availability of feeds. A better understanding of the current breeds, management systems and growing conditions is needed before the introduction of new genetics.</p> <p>There is limited information about the grazing lands of South Sudan. Information is needed concerning grass/brush/forb (or flowering plant used as forage) species, propagations, fertilization, root structure, production cycles and other general plant characteristics prior to making any recommendations.</p> <p>It should be noted that both livestock and plant performance is an expression of the environment in which species reside. Changing the genetics may or may not improve performance and could actually result in poorer performance. For example, limited recorded effort has been given to selecting faster maturing females from the current local breeds. Furthermore, animals that have adapted to the local environment can resist heat and disease threats better than breeds brought into the country from significantly different environments. Numerous research studies indicate that both neonatal nutrition and nutrition during the first few months has a significant impact on sexual maturity and hence performance.</p> <p>The issue of genetics is complicated and simply stating that the genetics of a herd will be improved by introducing new breeds can be problematic. Recent observations from Australia in the popular press indicated that a ranch was more profitable raising two smaller maturing animals as compared to one large framed animal that was not adapted to the region (Australian Livestock Reports, accessed June 30, 2014). Changes in genetics are long term changes that must be carefully studied and applied. A full understanding of the existing information and production cycle has to be considered. This is just one example of where an efficient livestock research centre is greatly needed.</p> <p>It is recommended that this project be designed and implemented with an internationally recognized university, consortium of universities or international research consortiums which have recognized experience in animal science, rangeland science, and forage disciplines. Moreover, an arrangement of this sort will allow for an exchange program for students and professors to enhance skills and technical ability.</p>
(2) Objectives:	<p>The objective of the program is to establish livestock research centres which address the needs of the livestock industry. With this comes the flexibility to search for new technologies, management systems and applications to improve livestock efficiency and health. It will also lead to the production of protein products for the consumer of South Sudan. Assessments for the component and activity objectives could be done in the form of a Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis. This type of analysis is commonly done when starting a project or business venture.</p>
(3) Overall description including temporal and spatial extent of project:	<p>The project will start in 10 years time and is designed to evaluate the industry and, with the assistance of an industry wide steering committee, determine research priorities and develop a strategic plan to address the priorities. This project will help develop long range solutions to addressing genetic improvement of livestock and grasses. The strategic plan that is developed could include creating research facilities or it could suggest linking with known research organizations. CAMP's overall goal is to allow the industry to grow and human capacity to develop in all industry segments before starting this project addressing long term research goals. The goal of the project is to develop a long range solution to addressing genetic improvement of livestock and grasses.</p> <p>The recommendation is to have at least 3 livestock research centres in South Sudan. They should be housed in already existing agricultural universities. Funding for these centres after donor agencies have completed the initial project should come from a partnership of university and Ministry of Agriculture funding. Faculty and staff working in the research centres will also be responsible for obtaining funds through research grants.</p>

Items	Information
(4) Component structure:	<p>Private industry can play a major role in funding research projects affecting specific issues within the livestock industry.</p> <p>Component 1: Assessment of industry resources Component 2: Establishment of Steering Committee and strategic plan Component 3: Location selection and construction phase Component 4: Staff selection and training</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Assess industry resources both services and physical</p> <p>Activity 1.1: Assess the meat industry in terms of providing an ongoing supply of animal protein with an accompanying Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis. Outputs: SWOT for meat industry. 3 current government mid- level staff (livestock specialists) will take 2 months to create assessment.</p> <p>Activity 1.2: Assess the dairy industry and develop a SWOT analysis. Outputs: SWOT for dairy industry. 3 current government mid- level staff (dairy specialists) will take 2 months to create assessment.</p> <p>Activity 1.3: Assess grasslands (rangelands) and other potential areas for production. Outputs: Completed Grasslands (rangelands) assessment. 3 current government mid-level staff (range specialists) will take 4 months to complete assessment.</p> <p>Activity 1.4: Assess the demonstration farms. Outputs: Completed assessment of current demonstration farms. 2 current government mid-level staff (extension specialists) will take 1 month to complete assessment.</p> <p>Activity 1.5: Assess all livestock facilities, slaughter, processing, inputs, universities, etc. Outputs: Completed livestock facilities and service industry assessment. 2 current government specialists (livestock specialists) will take 3 months to complete assessment.</p> <p>Component 2: Establish a Steering Committee with the purpose of providing industry guidance for developing research priorities</p> <p>Activity 2.1: Develop method for identifying industry association members, identify members. Outputs: Association members identified. 2 Association members will participate in quarterly meetings annually at University of Juba.</p> <p>Activity 2.2: Develop method for identifying appropriate ministry members, identify members. Outputs: Ministry Members identified. 2 Ministry members will participate in quarterly meetings annually at University of Juba.</p> <p>Activity 2.3: Develop method for identifying members of teaching facilities and universities (identify members, but members from universities should be administrative level such as Deans and Department Heads of Agricultural Colleges/Departments with emphasis on Animal Science and Rangeland Science departments. Outputs: Members of teaching facilities and universities identified. 2 university administrators (6 total) from each of the universities where livestock centres are located will attend quarterly meeting annually in Juba.</p> <p>Activity 2.4: Develop method for identifying members from in-country development partners, identify members. Outputs: Development partner identified. 4 development partners will attend a quarterly meeting annually in Juba.</p> <p>Activity 2.5: Develop a guiding Charter which addresses roles and term limits for the steering committee. Outputs: Charter established.</p> <p>Activity 2.6: Develop subgroups based on industry sectors. Outputs: Subsector groups identified.</p> <p>Activity 2.7: Develop short, medium and long term research objectives. Outputs: Short, medium and long term research objectives identified.</p> <p>Activity 2.8: Develop plan to address the research objectives which can include the development of research centres. Outputs: Research objectives identified through steering committee.</p> <p>Activity 2.9: Implement strategic plan. Outputs: Strategic plan implemented.</p> <p>Component 3: Location selection and construction phase.</p> <p>Activity 3.1: Steering committee will choose at least 3 locations (within already existing agricultural universities). Outputs: Possible locations include Juba University, Upper Nile University, and Western Bahr el Ghazal University.</p> <p>Activity 3.2: Using a transparent bid process select a contractor to either construct new</p>
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Items	Information
	<p>facilities on university land or remodel existing structures within the university. Research centres would need to have adjoining land where livestock could be corralled as well as land for rangeland grass, shrub, and forb research plots could be maintained.</p> <p>Outputs: Each research centre will need the following minimum inputs: 10 hectares of land (30 hectares total) Each centre will need 1 main building to house offices. 3 buildings total (1 for each centre) with each building being 1,000 sq. meters. Holding pens for livestock. Each centre will need 1 hectare of land for holding pens. Storage barns. Each facility will need 1 storage barn. Each storage barn will be a minimum of 3,000 square meters.</p> <p>Component 4: Staff selection and training Activity 4.1: Staffing selection would be as follows: 3- Senior level research centre Directors (1 for each centre) 12- Mid to Senior level researchers with experience in Animal, Rangeland, and Veterinary Sciences (4 for each research centre) 9- Entry level research assistants (3 for each research centre) 6- Mid-level administrative assistants (2 for each research centre) Activity 4.2: Training will take place for 24 research centre technical staff to ensure they understand proper research design, statistical analysis, and methods for publishing completed work in scientific journals. Outputs: 24 staff trained for 30 days during the first year of the project. Location of training will be Juba University, Juba.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<p>The assessments will need to be completed by:</p> <ul style="list-style-type: none"> • 3 current government mid- level staff (livestock specialists) will take 2 months to create assessment. • 3 current government mid- level staff (dairy specialists) will take 2 months to create assessment. • 3 current government mid-level staff (range specialists) will take 4 months to complete assessment. • 2 current government mid-level staff (extension specialists) will take 1 month to complete assessment. • 2 current government specialists (livestock specialists) will take 3 months to complete assessment. <p>Staffing of research centre staff will be as follows:</p> <ul style="list-style-type: none"> • 3- Senior level research centre Directors (1 for each centre) • 12- Mid to Senior level researchers with experience in Animal, Rangeland, and Veterinary Sciences (4 for each research centre) • 9- Entry level research assistants (3 for each research centre) • 6- Mid-level administrative assistants (2 for each research centre) <p>Steering committee will consist of:</p> <ul style="list-style-type: none"> • 2- livestock association (private sector) members • 2- Ministry of Agriculture members • 6- university administrators • 4- development partner members
(2) Description of beneficiaries within the framework of the project:	<p>The end beneficiaries will be the livestock producers followed by consumers. Producers will benefit from the information that will result in improved production and efficiency. Consumers will benefit from increase production at a more economical price.</p>

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<p>The outcome is to have a strategic plan and defined research priorities for the industry. The impact will result in a focused strategic research plan for the livestock industry.</p>
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td> Negative: b Positive: d </td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: b Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: b Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • Research centres may have a negative impact on the environment due to animal waste. However, animal waste can be collected and then composted. Compost can then be sold to farmers for fertilizer. <p>(Positive)</p>		

Items	Information
	<ul style="list-style-type: none"> • Research centres will have a significant positive impact on the livestock industry by introducing advanced livestock production techniques unique to South Sudan.

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • Find copies of recent assessments • Long range research plans and priorities discussed • Steering committee members identified • No operational livestock research centres in South Sudan
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • Updated assessments completed • Steering committee developed and operational • Charter for Steering Committee developed and available to public • Long Range research plans and priorities developed • At least 3 livestock research centres constructed/remodelled and operational • Staff hired and fully trained
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> • Reports, interim and final • Steering committee meeting notes • Research grants obtained • Research published in scholarly journals and presented at professional conferences
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> • Directorate of Animal and Fisheries Research and Development; all other MLFI Directorates.

2.7 Required human resources

(1) Principle of human resources management:	<ul style="list-style-type: none"> • Capacity building of members • Having private industry help set direction of research
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> • 3- Senior level research centre Directors (1 for each centre) • 12- Mid to Senior level researchers with experience in Animal, Rangeland, and Veterinary Sciences (4 for each research centre) • 9- Entry level research assistants (3 for each research centre) • 6- Mid-level administrative assistants (2 for each research centre)
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Livestock industry representatives (private sector) will work with research centre staff to help direct research needs and goals. The actual number of representatives is still yet to be determined due to the fact it is unknown which industry representatives are indeed interested in this partnership. At least 2 will be involved as members of the steering committee.</p>

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	H L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	There is a high level of risk associated with the project. There are several groups represented and there is a high risk for conflict. Moreover, the project is cross cutting and should be driven to address industry concerns and direction. Strong leadership at the Ministry and university levels are essential for success of this project.

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	Research programs are expensive to develop and maintain. Moreover, staffing is critical and yearly operation costs can be prohibitive. Results from the investment may be years in the future and short term success may be limited. It is recommended that the program be initiated at the later stages of the CAMP initiative to ensure that the staff have the necessary skills; that the industry has had the opportunity to find direction; and, that funding sources are understood. It is recommended that this will be a long term project.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>Human resources (on-going):</p> <ul style="list-style-type: none"> • 3- Senior level research centre Directors (1 for each centre) • 12- Mid to Senior level researchers with experience in Animal, Rangeland, and Veterinary Sciences (4 for each research centre) • 9- Entry level research assistants (3 for each research centre) • 6- Mid-level administrative assistants (2 for each research centre) <p>Other costs (on-going):</p> <ul style="list-style-type: none"> • Land with sufficient size to house livestock and to maintain grass/forb research plots • Equipment procurement, upkeep, and staying up to date • Livestock for centres • Feed for livestock housed at centres • Tractor and implements for each centre to maintain research plots • Office supplies and maintenance • Communication allowances (cell phones and internet) • Transportation (each centre will need at least one car for staff transport and one truck for completing farm work)
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3.4.26 Development of livestock extension systems including Community Animal Health Workers (CAHW) project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Livestock		
(2) Project name:	Development of livestock extension systems including Community Animal Health Workers (CAHWs) project		
(3) Project ID:	0 2 . 2 6 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2020/21	Ending FY: 2029/30	Duration (years): 10
(5) Total investment:	SSP 18,726,000	USD 4,681,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		LS.SA2	Public sector institution and management capacity development	Table 2-3
(2) Government organisation:	08	MLFI-EX	Directorate of Livestock and Fisheries Extension	Table 2-6
	05:07	MLFI-AP;VS	Directorate of Animal Production and Range Management; Directorate Veterinary Services	Table 2-6
(3) Activity types:	203	SP-EX	Service delivery and infrastructure development- Extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	X
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	X
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income		

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>It was estimated in December 2012 that there were 2,245 individuals throughout South Sudan that have received training by various organizations as Community Animal Health Workers (CAHW). These trainings have been provided by 28 organizations and the CAHWs are an important asset for the livestock industry. Moreover, in surrounding countries CAHWs or the equivalent have played an important part in the livestock industry both in veterinarian services and general livestock production. CAHW workers have been serving as the “extension services” for the livestock industry. The purpose of this program is to first recognize the workers (identify), second is to develop a strategy for long term use within the industry, and third create a national livestock extension service with some of the CAHW workers incorporated into this service. It is important to mention that livestock extension services will be very important for the commercialization of the livestock and poultry industry. It is important that the Ministry of Animal Resources and Fisheries (MFLI) and the government of South Sudan recognize that they are an important part of the development of South Sudan and will enable the country to be recognized by the World Organization for Animal Health (OIE) and achieve economic growth within the livestock industry. These individuals can assist in many activities for the industry such as livestock identification, census of the industry, disease monitoring, livestock and poultry production training, vaccination campaigns, early warning system, and emergency preparedness.</p> <p>Of importance is the standardization of training that these extension staff will receive. Over the years several organizations have incorporated training of community animal health workers as part of their assistance plans for the people of South Sudan. There is tremendous variety in the information provided, teaching methodologies and significance of the information for the industry. It is understood that CAHWs play an important part in the implementation of veterinarian and livestock production services throughout the country. With acceptance into OIE, extension services can immediately assist the country in meeting monitoring, vaccination and other services requirements. However, due to the wide variety of training and vast differences in the technical ability of organizations involved, it is critical that training be standardized to meet the needs of South Sudan.</p>
(2) Objectives:	<p>A national livestock extension service can play an important role for the livestock and poultry industry in South Sudan. However, existing CAHW individuals must be identified, existing livestock technical specialists identified, and together their training standardized to achieve any advantage. Additionally, there must be a method for directing the individuals to achieve these goals. Before any benefit can be received these individuals must be identified. Once identified the areas where they are located must be mapped and any gaps in coverage for the country must be identified and newly recruited and trained extension staff be placed in these areas that need coverage. The national extension system will not need the 2,245 current CAHW workers. These workers will have the opportunity to apply to be a livestock extension worker but there will not need to be more than 65 livestock extension workers/specialists in the entire country. States that have a higher concentration of livestock will have more extension staff assigned. CAHW workers not hired into the extension service can continue providing a valuable resource to their communities in the same manner that they have for the past few years.</p>
(3) Overall description including temporal and spatial extent of project:	<p>The goal of the program is to identify CAHWs, create a national livestock extension service, incorporate a selected number of CAHWs into the extension service, update/standardize training and utilize extension services in the livestock sector. This will be done by the creation of a national livestock extension service created for the implementation of many animal production and veterinarian services to producers. Currently the number of professionally trained animal scientists and veterinarians in South Sudan is inadequate when supplying vaccinations and general health services to the private sector. Similarly, there is a lack of readily available technical (extension) services available for livestock and poultry producers in remote locations. Moreover, the current structure for vaccination supplies is under the direct supervision of MLFI which again has insufficient reach when undertaking nation-wide vaccination, health care programs and other activities. An additional challenge is with the training that current CAHWs have received. There has been no standardized and officially recognized training program. These trainings were provided by 28 different organizations many of which have limited technical capacity within the industry. Establishing a common baseline for a new livestock extension system will provide a common starting point for the delivery of animal and veterinary services. In addition, existing CAHWs can become an important source of extension services in production areas as well as disease monitoring. It will be several years before there are sufficient numbers of professionally trained veterinarians available in South Sudan to provide private sector services.</p>
<p>The local technical experts from MLFI Veterinary Science and Animal Production with</p>	

Items	Information
	<p>assistance from international technical and educational (training) experts will work together to develop a standardized multi-level training program for livestock extension staff. The training material, modules and evaluation forms must be appropriate for the learners. The information developed will be used by all organizations designated to provide extension training. This will be a country requirement with no exceptions. This will ensure that the material is the same throughout the country and that extension staff can be certified. In other words, a standardized training program for livestock extension certification will be developed. Once this initial project no longer receives funding from a donor agency, MARF will need to fund the extension services program. Funding could come from the national, state, and county levels. This is the funding model for extension services in the United States.</p>
(4) Component structure:	<p>Component 1: Identify CAHW, review any certificates, record trainer (organization) and map location of CAHW service areas. Component 2: Develop strategy, work plan, training plan and implementation guidelines Component 3: With the help of government ministry staff, livestock industry leaders, and development agency partners create a national livestock extension system. Component 4: Implement the national livestock extension system with certified livestock extension staff located in each state.</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs

<p>Component 1: Identify CAHW, review any certificates, record trainer (organization) and map location of CAHW service areas. Activity 1.1: Develop a database with name, courses attended, certificates received, organization whom provided training and work area (physical location). The locations and work areas will be mapped. It is critical that all areas have representation and if a location is lacking in coverage a plan to increase coverage will be developed. Outputs: 5 mid-level staff from the Directorate of Animal Production and Range Management would be assigned to find this information and enter it into a database.</p> <p>Component 2: Develop a national livestock extension program under the supervision of MLFI that has a direct connection with the livestock research centres. Activity 2.1: Create a system for the hiring of livestock extension staff (current CAHWs would have the opportunity to apply). Outputs: 7 senior-level staff from the Directorates of Animal Production, Livestock and Fisheries Extension, and Veterinary Services would serve on this national hiring committee. Activity 2.2: National livestock extension services implemented in each state with staff being housed in one of the following: current state government office facilities, universities, demonstration farms.</p> <p>Component 3: Staffing and training Activity 3.1: The following staffing would take place: 70- Certified livestock extension specialists (10 in the 4 states with the most livestock and 5 in the additional 6 states). 45- Mid-level administrative staff (4 in each of the 10 states and 5 at the national level). 50- Community Animal Health Workers (CAHW) (2 in each border point according to 25 border points). 158- CAHW's (2 in each county according to 79 counties of south Sudan). Activity 3.2: Standardized training would take place for all 70 extension specialists. Specialists will need to have backgrounds in animal science, rangeland science, veterinary medicine, agri-business (as related to the livestock industry), and poultry production. Additionally standardized training will need to take place for CAHW workers. Outputs: 70 extension staff will participate in 30 days of training in the first year in Juba. Each year after that they will participate in an annual conference held in Juba. 208 CAHW workers will participate in 14 days of training the first year in Juba. Each year after the first year they will all attend an annual conference in Juba. Activity 3.3: Extension specialists will be expected to work closely with demonstration farms, universities, livestock research centres, and border crossing facilities. Outputs: Information being obtained through research centres and demonstration farms will be disseminated to producers by extension staff.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:

<p>For obtaining information on current CAHW and creating database:</p> <ul style="list-style-type: none"> • 5 mid-level staff from the Directorate of Animal Production and Range Management would be assigned to find this information and enter it into a database. <p>National hiring committee to select extension workers for each state:</p> <ul style="list-style-type: none"> • 7 senior-level staff from the Directorates of Animal Production, Livestock and Fisheries Extension, and Veterinary Services would serve on this national hiring committee.

Items	Information										
(2) Description of beneficiaries within the framework of the project:	<p>National extension staff:</p> <ul style="list-style-type: none"> • 70- Certified livestock extension specialists (10 in the 4 states with the most livestock and 5 in the additional 6 states). • 45- Mid-level administrative staff (4 in each of the 10 states and 5 at the national level). • 50- Community Animal Health Workers (CAHW) (2 in each border point according to 25 border points). • 158- CAHW's (2 in each county according to 79 counties of south Sudan). <p>Livestock producers in each state will benefit from modern technologies disseminated by extension workers.</p>										
2.4 Outcomes, impact and contributions to value added (i.e. economic growth)											
(1) Outcomes and impact:	A functional livestock extension system that provides non-biased research based information to livestock and poultry producers throughout South Sudan.										
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)										
2.5 Environmental and social impact, and mitigation measures											
(1) Expected level of negative or positive impact (select an indicator from the list in the right)	<table border="1" style="width: 100%;"> <tr> <td style="width: 15%;">Negative: a</td> <td>Project:</td> </tr> <tr> <td>Positive: d</td> <td>a: is likely to have minimal or little impact on the environment and/or society</td> </tr> <tr> <td></td> <td>b: may have an impact on the environment and/or society</td> </tr> <tr> <td></td> <td>c: is likely to have a significant impact on the environment and/or society</td> </tr> <tr> <td></td> <td>d: will have a significant impact on the environment and/or society</td> </tr> </table>	Negative: a	Project:	Positive: d	a: is likely to have minimal or little impact on the environment and/or society		b: may have an impact on the environment and/or society		c: is likely to have a significant impact on the environment and/or society		d: will have a significant impact on the environment and/or society
Negative: a	Project:										
Positive: d	a: is likely to have minimal or little impact on the environment and/or society										
	b: may have an impact on the environment and/or society										
	c: is likely to have a significant impact on the environment and/or society										
	d: will have a significant impact on the environment and/or society										
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • The expected environmental impact during this phase is negligible since the activities are primarily identification and skill training of livestock extension workers. <p>(Positive)</p> <ul style="list-style-type: none"> • There is substantial positive impact to livestock producers. They will receive non-biased, research based technical assistance from extension specialists that will improve their production and income levels. 										
2.6 Monitoring and evaluation for impact measurement											
(1) Measurable indicators and situation at a starting point:	• Unknown number of CAHWs identified and no operational livestock extension system.										
(2) Measurable indicators and situation at the end point:	A national livestock extension system that is implemented by MLFI. A total number of 70 certified female and male extension specialists working in all 10 states that have received standardized training.										
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> • Simple sign in sheets and data entry into simple commercial data base. • Use of computer software to write up final livestock extension system. 										
(4) Responsible parties for the monitoring and evaluation:	• Directorate of Livestock and Fisheries Extension; Directorate of Animal Production and Range Management; Directorate of Veterinarian Services.										
2.7 Required human resources											
(1) Principle of human resources management:	This project requires the ability to identify the CAHWs, develop a data base with name, training and location and then use this information to include the CAHWs into the proposed national livestock extension program. The project will further require the hiring of qualified livestock extension specialists and qualified administrative staff.										
(2) Required human resources in the public sector (Positions, grades and numbers):	<p>For obtaining information on current CAHW and creating database:</p> <ul style="list-style-type: none"> • 5 mid-level staff from the Directorate of Animal Production and Range Management would be assigned to find this information and enter it into a database. <p>National hiring committee to select extension workers for each state:</p> <ul style="list-style-type: none"> • 7 senior-level staff from the Directorates of Animal Production, Livestock and Fisheries Extension, and Veterinary Services would serve on this national hiring committee. <p>National extension staff:</p> <ul style="list-style-type: none"> • 70- Certified livestock female and male extension specialists (10 in the 4 states with the most livestock and 5 in the additional 6 states). • 45- Mid-level administrative staff (4 in each of the 10 states and 5 at the national level). • 50- Community Animal Health Workers (CAHW) (2 in each border point according to 25 border points). • 158- CAHW's (2 in each county according to 79 counties of south Sudan). 										
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	1 experienced consultant to lead the process that has an extensive background in extension education systems. Consultant would work for 1 year.										
2.8 Risk assessment with respect to project objectives and resources to be applied											
(1) Expected level of risk:	<table border="1" style="width: 100%;"> <tr> <td style="width: 25%; text-align: center;">H</td> <td style="width: 25%; text-align: center;">L: Low</td> <td style="width: 25%; text-align: center;">M: Medium</td> <td style="width: 25%; text-align: center;">H: High</td> <td style="text-align: right;">(select an indicator from the list)</td> </tr> </table>	H	L: Low	M: Medium	H: High	(select an indicator from the list)					
H	L: Low	M: Medium	H: High	(select an indicator from the list)							
(2) Explanation of expected risks:	The level of risk is High due to the fact that an entirely new national extension system is										

Items	Information
	being developed. This system will eventually need their own line item in the MLFI budget to continue on-going extension services. The risk of this project not continuing to be funded is high as this may not be seen as a high priority in the future by Ministry officials. However, extension systems are the backbone of driving new technologies and disseminating important information to agricultural producers.

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	This is a long term project that will need to be funded by MLFI after the donor agency funding is discontinued. To reduce costs of implementing this project, extension staff could be housed in already existing state/county government offices, at demonstration farms, and at universities.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>Human resources (on-going):</p> <ul style="list-style-type: none"> • 70- Certified livestock extension specialists (10 in the 4 states with the most livestock and 5 in the additional 6 states). • 45- Mid-level administrative staff (4 in each of the 10 states and 5 at the national level). • 50- Community Animal Health Workers (CAHW) (2 in each border point according to 25 border points). • 158- CAHW's (2 in each county according to 79 counties of south Sudan). <p>Other costs (on-going):</p> <ul style="list-style-type: none"> • Transportation (vehicles and fuel) enabling extension workers to travel to livestock producers within their assigned geographic regions. • Computer equipment for extension staff. • Communication allowances (cell phones) for staff to utilize in communicating with livestock producers. • Office space in existing government or university buildings. • Office supplies and maintenance. • Well-equipped extension studios for editing radio and TV programmes (approximately \$10,000 to purchase equipment)
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SSP/USD = 4

Cost group	Phase 1		Phase 2			Phase 3			Phase 4			Total																	
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000	USD '000	% to total	
Project duration																													
Total (SSP '000)						7,626	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	18,726	4,681	100%	
Total (USD '000)						1,906	308	308	308	308	308	308	308	308	308	308	308	308	308	308	308	308	308	308	308	4,681			
% to total						41%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	100%				

Public sector project
 Routine work by government
 Private sector project
 Routine work by private sector

3.4.27 Enhancement of inter-government, donor agencies, civil society, and private sector coordination project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Livestock		
(2) Project name:	Enhancement of inter-government, donor agencies, civil society, and private sector coordination project		
(3) Project ID:	0 2 . 2 7 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2015/16	Ending FY: 2019/20	Duration (years): 5
(5) Total investment:	SSP 94,000	USD 23,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		LS.SA2	Public sector institution and management capacity development	Table 2-3
(2) Government organisation:	02	MLFI-SC	Directorate of State Collaboration and Special Projects	Table 2-6
	01:04	MLFI-PL:IM	Directorate of Planning; Directorate of Investment, Marketing, and Supplies	Table 2-6
(3) Activity types:	104	ID-IM	Institutional development- Implementation and monitoring	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	X
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	X
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	
	02	PH2	Phase II (2020/21-2024/25, 5 years)	
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:	<p>The objective is to develop a registration process within the Ministry of Livestock and Fisheries Industry (MLFI) that registers all organizations working in livestock and veterinarian services. This information will be coordinated and utilized by those organizations for training the private sector in livestock and business activities. Currently it is estimated that 28 organizations are involved with the livestock industry. Many of the projects are humanitarian and offer limited technical value to the industry nor is there any clear guidance for the implemented programs. Livestock are an important economic resource for South Sudan and measures need to be implemented to guide organizations. Training should be consistent and standardized across the implementing bodies (NGOs, etc.) and the program outcomes consistent with the long term strategy for the livestock industry.</p> <p>From 1983 to 2005, Non-Governmental Organizations (NGOs) and other agencies worked in a consortium with Operation Life Line Sudan coordinated by UNICEF. This was an emergency operations program with limited supervision from the government. The lack of supervision has resulted in a negative impact with duplication by various agencies, with concentration in some regions and not others. Furthermore, the budgets and work plans (activities) were not discussed with ministry and government officials to coordinate efforts and address any existing gaps. Experience with surrounding countries demonstrates that donor and implementing partners need to coordinate with government ministries and implement within the policies, strategy and framework of the country.</p>
(2) Objectives:	<p>An oversight organization that consists of a Ministry specified number of oversight committee members that registers NGOs, civil society organizations, and any other organizations that are working or are intending to perform services or work in the livestock and poultry sector of South Sudan. This committee will need to consist of subject matter specialists as well as Ministry government officers. The overall goal will be transparent organizations that implement plans and standardized training in accordance with national strategy.</p>
(3) Overall description including temporal and spatial extent of project:	<p>This is a safe guard mechanism until the South Sudan public sector has the ability themselves to provide educational and vocational training for professionals working directly with livestock and poultry producers. With the assistance of current subject matter specialists and international subject matter specialists a guiding organization will be developed with a process for reviewing livestock and veterinarian training material that is used by NGOs, civil society organizations and other entities working in livestock and veterinary services plus registering organizations. It is important that the quality of information used in training be consistent with the long term agricultural goals of South Sudan and that the information is technically correct and not misleading. There have been reported cases of inaccurate information being conveyed to producers. This organization allows for the registration of groups plus reviews proposed activities with the appropriate division of a government ministry. The agency will enhance transparency between organizations and the agricultural government ministries.</p>
(4) Component structure:	<p>Component 1: Develop (organize) a ministerial group or mechanism to register people (organizations) providing technical and vocational information to livestock and poultry producers.</p> <p>Component 2: Develop a review process of reviewing education material and plans of the organizations.</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1: Develop a functional oversight organization that can register individuals and organizations working with livestock and poultry in South Sudan.</p> <p>Activity and Outputs for Component 1 are the same:</p> <ul style="list-style-type: none"> An official registration form that is provided to organizations. An oversight committee within MLFI creates a method for reviewing the information to be used during training and activities involving the livestock and poultry industry. 13 MLFI staff will meet at the start of the project for a 5 day conference in Juba. 10 MLFI staff will meet twice per year after the first year for a 3 day conference (6 days total per year) in Juba. No new office or building space will be needed since already existing MLFI staff will be tasked with completing this project. <p>Component 2: Develop a method utilizing local subject matter specialists, with the assistance of qualified international subject matter experts, to ensure that the information that is to be taught and shared with the private sector is in agreement with the long term industry goals and is technically correct.</p> <p>Activity and Outputs for Component 2 are the same:</p>
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Items	Information
	<p>The oversight committee will review curriculum material of the organization wishing to be registered to determine technical correctness and that the curriculum is in accordance with national strategy.</p> <p>The oversight committee will then register the organization with an official certificate (if organization is in compliance) or if the organization is not in compliance will request the organization to correct recommended curriculum.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<p>Providers must have the ability to develop a simple licensing (registration) process. This includes developing an application form, an application review process with appointed authorities with signature power, and a certificate of permission or license to work in the livestock industry.</p> <ul style="list-style-type: none"> • A team of at least 3 mid-level government staff will need to conduct a survey to determine all the NGO's and civil society organizations delivering services in South Sudan. • At least 3 staff from the appropriate government ministry assigned to serve on the committee to evaluate, approve or reject, and register organizations that apply for certification. • At least 5 senior level subject matter specialists (livestock, crops, irrigation, fisheries, and forestry) to serve on the oversight committee. • At least 2 office staff who receive applications, enter information in a computer database, and complete the final certificate for the organization. • Two computers for office staff to use. • Transportation resources for visits to NGO and civil society organizations. • Communication allowance (cell phone and internet) for office staff to stay in touch with registered organizations.
(2) Description of beneficiaries within the framework of the project:	<p>The primary beneficiary is MLFI. This provides a simple registration process that enables better coordination and enhances government efficiency. Secondary beneficiaries are producers that will benefit since programs will be in accordance with national strategy and curriculum will be technically correct.</p>

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<p>A licensing and coordination committee that allows subject matter experts to review the information to be utilized during trainings and other activities.</p>
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td> Negative: a Positive: d </td> <td> <p>Project:</p> <p>a: is likely to have minimal or little impact on the environment and/or society</p> <p>b: may have an impact on the environment and/or society</p> <p>c: is likely to have a significant impact on the environment and/or society</p> <p>d: will have a significant impact on the environment and/or society</p> </td> </tr> </table>	Negative: a Positive: d	<p>Project:</p> <p>a: is likely to have minimal or little impact on the environment and/or society</p> <p>b: may have an impact on the environment and/or society</p> <p>c: is likely to have a significant impact on the environment and/or society</p> <p>d: will have a significant impact on the environment and/or society</p>
Negative: a Positive: d	<p>Project:</p> <p>a: is likely to have minimal or little impact on the environment and/or society</p> <p>b: may have an impact on the environment and/or society</p> <p>c: is likely to have a significant impact on the environment and/or society</p> <p>d: will have a significant impact on the environment and/or society</p>		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • There will be a minimal environmental impact. The main goal is to develop an organizational body with the responsibility to oversee organizations and sector specific training material. <p>(Positive)</p> <ul style="list-style-type: none"> • Coordination among all technical providers in South Sudan will be a positive step that will ensure producers are receiving standardized, factual information from trainers. 		

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • No registered organizations within South Sudan.
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • Number of registered organizations within South Sudan that have received MARF registration and certification.
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> • Number of certificates approved.
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> • Department of State Collaboration and Special Projects; Directorate of Planning; Directorate of Investment, Marketing, and Supplies

2.7 Required human resources

(1) Principle of human resources management:	<p>The committee assigned by MILF will have the ability to develop an application form, review the information, and provides a certificate of authorization. Furthermore, subject matter specialists on the committee will conduct a simple review process that reviews training and education material to be utilized during the organization's work in country.</p> <ul style="list-style-type: none"> • A team of at least 3 mid-level government staff will need to conduct a survey to determine all the NGO's and civil society organizations delivering services in South Sudan. • At least 3 staff from the appropriate government ministry assigned to serve on the
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Items	Information
(2) Required human resources in the public sector (Positions, grades and numbers):	<p>committee to evaluate, approve or reject, and register organizations that apply for certification.</p> <ul style="list-style-type: none"> • At least 5 senior level subject matter specialists (livestock, crops, irrigation, fisheries, and forestry) to serve on the oversight committee. • At least 2 office staff who receive applications, enter information in a computer database, and complete the final certificate for the organization.
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<ul style="list-style-type: none"> • No required human resources from the private sector. This will be a MLFI driven project. <p>An international consultant that can provide technical assistance in organization and process development. It is assumed that additional technical experts will be involved in the review and standardization of the training.</p>

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	<table border="1" style="width: 100%;"> <tr> <td style="width: 25%; text-align: center;">M</td> <td style="width: 25%; text-align: center;">L: Low</td> <td style="width: 25%; text-align: center;">M: Medium</td> <td style="width: 25%; text-align: center;">H: High</td> <td style="text-align: right;">(select an indicator from the list)</td> </tr> </table>	M	L: Low	M: Medium	H: High	(select an indicator from the list)
M	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	<p>The risk associated with this project would be rated as medium due to the lack of any program or process from the past. Currently many organizations are working in South Sudan and the current government is not aware of their activities or their presence. These organizations may take offense at the process and complain. It is important for the advancement of the industry that people or organizations working in the livestock industry understand that the long term responsibilities belong to the government and people of South Sudan who have an important and valid concern about their future.</p>					

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	<p>Coordination mechanism to be instituted. Monitoring and evaluation every quarter of the project life.</p>
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<ul style="list-style-type: none"> • At least 3 staff from the appropriate government ministry assigned to serve on the committee to evaluate, approve or reject, and register organizations that apply for certification. • At least 5 senior level subject matter specialists (livestock, crops, irrigation, fisheries, and forestry) to serve on the oversight committee. • At least 2 office staff who receive applications, enter information in a computer database, and complete the final certificate for the organization. • Two computers for office staff to use. • Transportation resources for visits to NGO and civil society organizations. • Communication allowance (cell phone and internet) for office staff to stay in touch with registered organizations.
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Part 3: Project cost estimation

02.27 Enhancement of inter-government, donor agencies, civil society, and private sector coordination project	Cost group	Phase 1		Phase 2			Phase 3			Phase 4			Total																										
		15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP'000	USD'000	% to total										
1 Management and operation of project		22	17	17	17	17																					88	22	94%										
1 Deployment of government staff																																							
2 Procurement of administrative services (contracted)																																							
3 Procurement of professional services (contracted)		10	5	5	5	5																																	
4 Implementation of staff training		10																																					
1 Kick off conference by MLFI officers at Juba																																							
2 Regular conference by MLFI at Juba																																							
5 Implementation of research, studies and surveys																																							
6 Delivery of extension and training services to the private sector		12	12	12	12	12																																	
7 Operation and maintenance		4	4	4	4	4																																	
1 Supplies and materials for oversight committee		4	4	4	4	4																																	
2 Communication		4	4	4	4	4																																	
3 Fuels		4	4	4	4	4																																	
2 Construction of infrastructure and procurement of equipment		6																																					
1 Construction of office buildings																																							
2 Construction of research, training and other specialized buildings																																							
3 Construction of feeder roads																																							
4 Construction of production, market and transportation facilities																																							
5 Acquisition of land																																							
6 Procurement of vehicles																																							
7 Procurement of equipment		6																																					
1 ICT equipment		6																																					
3 Subsidies, equity and loans																																							
1 Provision of cash and/or in-kind subsidies																																							
2 Provision of training services to the private sector																																							
3 Equity investments																																							
4 Provision of loans																																							
5 Social assistance/donation (Emergency)																																							
Total (SSP '000)		28	17	17	17	17																																	
Total (USD '000)		7	4	4	4	4																																	
% to total		30%	18%	18%	18%	18%																																	

Public sector project
Routine work by government

Private sector project
Routine work by private sector

3.4.28 Livestock public sector institutions capacity development project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Livestock		
(2) Project name:	Livestock public sector institutions capacity development project		
(3) Project ID:	0 2 . 2 8 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2020/21	Ending FY: 2029/30	Duration (years): 10
(5) Total investment:	SSP 52,858,000	USD 13,215,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		LS.SA2	Public sector institution and management capacity development	Table 2-3
(2) Government organisation:	03	MLFI-AD	Directorate of Administration, Finance, and Human Resource Development-Department of Training	Table 2-6
				Table 2-6
(3) Activity types	210	SP-SI	Service delivery and infrastructure development	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	X
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	X
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income		

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>There are six recognized educational and technical training centres in South Sudan. They are: University of Bahr el Ghazal; University of Upper Nile; John Garang Memorial University of Science and Technology; Juba University; Marial Lou Training Centre; and Yei Agricultural Training Centre. Yei, John Garang and Marial Lou have all received foreign assistance to address course content and facilities. Of the six, Marial Lou is the only public sector training institute that offers technical skills development where technicians, animal health and animal production auxiliaries can be trained. However, the cost is prohibitive to most students and the curriculum appears to be limited in scope. Additionally, it appears that these 5 institutes minus ML are focused on academic training with a limited focus on technical skills that can be used immediately by extension workers and Community Animal Health Workers that can be then taught to producers. A fully functional education system ought to focus not only on traditional students but also on training older adults with limited skills. Traditional training of older learners is not appropriate and teaching methods differ.</p> <p>As mentioned above, the cost for attending Marial Lou (ML) is prohibitive to most people. A system needs to evolve which allows key community members to receive training. One solution could be to use ML as the basic training centre and have satellite programs in production areas. Moreover, the program could link with the other facilities if a cost advantage is realized.</p> <p>The system needs to be driven by the needs of the industry to develop from what appears to be a subsistence production system to a small holder commercial system. This includes business training and range management training. Best practices from surrounding countries are welcome and the potential for cross training ought to be explored.</p> <p>This project differs but builds on another CAMP project which standardizes delivery of information through NGOs, civil society organizations and others (Development of livestock extension systems including Community Animal Health Workers). The intent of this project is to develop trainers (extension and CAHW workers) who can train both additional trainers and producers while becoming important actors in the livestock value chains. These trainers can serve as important sources of technical expertise for local communities. The goal is to provide information and training to all of South Sudan.</p> <p>The intent of the project is to develop a system that can merge with the future agricultural education system of South Sudan. This project is designed to address the immediate needs of producers while evolving over the next twenty five years. It is envisioned that it will be incorporated into the public education and extension system at some point in time. This system allows the Ministry the time needed to develop the skills and training necessary to manage, lead and design long term educational, extension and research programs that coincide with industry objectives and strategy.</p>
(2) Objectives:	<p>To develop a comprehensive training program for the immediate needs of the livestock industry to evolve into a profitable and commercial industry contributing to rural development, poverty reduction and GDP growth. The design will allow the program to be incorporated into the future educational and ministry systems of South Sudan.</p>
(3) Overall description including temporal and spatial extent of project:	<p>The project is designed to evaluate the current facilities and faculty, and define gaps in skills and facilities. Using the information, a system will be designed to address the gaps and needs of the country to deliver valuable training to producers to enhance basic production skills combined with business basics. The six identified institutes may have the ability to provide all the training needs of student and producers throughout the country. As the country moves from sustainable to commercial production, certain skill sets are required in livestock producers. The primary objective of the program is to address the immediate needs of the producers and workers in the livestock industry with a secondary objective of younger student needs. Moreover, the project will be designed to be adapted in the future educational and Ministry system of South Sudan. The project will address the immediate educational and skill sets required to transform the current livestock industry into a sustainable and profitable industry that leads to economic growth, poverty alleviation, rural development and food security. Furthermore, the project will address the needs of all producers and will address gender needs at all levels.</p>
(4) Component structure:	<p>Component 1: Prioritization based on minimal growth of industry and ability to get services into remote locations. The goal is not to develop graduate programs but to develop knowledge transfer systems for the industry. There is no need for research type programs with this component.</p> <p>Component 2: National staff training and skills enhancement</p> <p>Component 3: Training facility enhancement</p> <p>Component 4: Curriculum development of various study areas</p> <p>Component 5: Specialists, teachers and staff training</p>

Items	Information
	Component 6: Industry specific training Component 7: Extension training and staffing

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

	<p>Component 1: Prioritization based on minimal growth of industry and ability to get services into remote locations. The goal is not to develop graduate programs but to develop knowledge transfer systems for the industry. There is no need for research type programs with this component.</p> <p>Activity 1.1: Awareness Activity 1.2: Evaluation of current staff skill sets in university and training centres Activity 1.3: Evaluation of current training centres (University of Bahr el Ghazai; University of Upper Nile; John Garang Memorial University of Science and Technology; Juba University, Marial Lou Training Centre and Yei Training Centre) Activity 1.4: Gap Analysis Activity 1.5: Report</p> <p>Component 2: National staff training and skills enhancement Activity 2.1: Basic and advanced animal science training Activity 2.2: Basic and advanced rangeland science training Activity 2.3: Basic and advanced wildlife management training Activity 2.4: Computer and information technology training</p> <p>Component 3: Training facility enhancement Activity 3.1: Determination of facility needs and location or locations. Activity 3.2: Financing plan developed Activity 3.3: Construction or remodelling of facility or facilities Activity 3.4: Staffing</p> <p>Component 4: Curriculum development of various study areas Activity 4.1: Basic and advanced animal science courses Activity 4.2: Basic and advanced rangeland science courses Activity 4.3: Basic and advanced wildlife management courses Activity 4.4: Business management courses Activity 4.5: Computer and informational technology courses Activity 4.6: Extension education courses</p> <p>Component 5: Specialists, teachers and staff training Activity 5.1: Specialists Activity 5.2: Teachers Activity 5.3: Support staff</p> <p>Component 6: Industry specific training Activity 6.1: Beef Cattle Short Courses Activity 6.2: Dairy Cattle and Milking Short Courses Activity 6.3: Sheep Short Courses Activity 6.4: Goat Short Courses Activity 6.5: Poultry Short Course (broiler and egg) Activity 6.6: Hatchery Short Courses Activity 6.7: Feed mill Short Courses Activity 6.8: Rangeland Management Short Courses Activity 6.9: Animal health Courses</p> <p>Component 7: Extension training and staffing Activity 7.1: Development of extension training courses Activity 7.2: Beef Cattle Activity 7.3: Dairy Cattle Activity 7.4: Sheep Activity 7.5: Goats Activity 7.6: Pasture management Activity 7.7: Livestock Business management Activity 7.8: Genetic Improvement Activity 7.9: Broiler Production Activity 7.10: Egg Production Activity 7.11: Delivery of extension courses Activity 7.12: Provision of extension services to producers Outputs: Please Note- The outputs for this project will be the same as those Activities already listed under each component section.</p>
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2.3 Service providers and beneficiaries

(1) Description of service providers within the

	Technical specialists that understand the needs of the industry to transform it into a commercial industry. Training specialists that understand how to train the target audience
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Items	Information					
framework of the project: (2) Description of beneficiaries within the framework of the project:	at the two levels, training of the trainer and producer. Trainers, facility operators, producers will receive appropriate training.					
2.4 Outcomes, impact and contributions to value added (i.e. economic growth)						
(1) Outcomes and impact:	A trained staff capable of providing the industry appropriate training for the transformation of the livestock industry from subsistence to commercialization. The impact will be growth in the industry and adoption of modern methodologies and techniques.					
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)					
2.5 Environmental and social impact, and mitigation measures						
(1) Expected level of negative or positive impact (select an indicator from the list in the right)	<table border="1"> <tr> <td>Negative: b Positive: a</td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: b Positive: a	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society			
Negative: b Positive: a	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society					
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures	<p>(Negative)</p> <ul style="list-style-type: none"> The project may have a negative impact on the environment with the construction of research and educational facilities. Waste disposal will need to be addressed. <p>(Positive)</p> <ul style="list-style-type: none"> Society will be positively impacted by focusing on commercial development and moving beyond subsistence. 					
2.6 Monitoring and evaluation for impact measurement						
(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> Number of Train the Trainer courses Number of training courses for producers Number of trainers trained Number of producers trained Number of Short Courses held Number of facilities modified 					
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> Number of Train the Trainer courses Number of training courses for producers Number of trainers trained Number of producers trained Number of Short Courses held Number of facilities modified 					
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> Attendance sheets Number of qualified trainers Facility records 					
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> Directorate of Administration, Finance, and Human Resource Development-Department of Training 					
2.7 Required human resources						
(1) Principle of human resources management:	<ul style="list-style-type: none"> Capacity building at all levels, trainers and producers for the livestock industry. 					
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> 40 Specialists 60 (training of trainers) field trainers in facilities 500 field trainers 					
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<ul style="list-style-type: none"> Dairy Specialist Beef Specialist Goat Specialist Sheep Specialist Wildlife Specialist Meat Science Specialist Animal Nutrition Specialist Agribusiness Specialist Training – Extension Specialist Range Specialist Poultry Specialist 					
2.8 Risk assessment with respect to project objectives and resources to be applied						
(1) Expected level of risk:	<table border="1"> <tr> <td>H</td> <td>L: Low</td> <td>M: Medium</td> <td>H: High</td> <td>(select an indicator from the list)</td> </tr> </table>	H	L: Low	M: Medium	H: High	(select an indicator from the list)
H	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	The project risk is assumed to be high. The project evaluates facilities which could lead to personal and political interests. The evaluation of programs is also highly risky since it too could be politically influenced. The number of desired trainers is very risky simply because of the volume of people needed. There is a high risk involved with the current ministry structure. The current structure is not designed to address and effectively deliver appropriate training for industry transformation.					

Items	Information
2.9 Other special considerations and/or notes	
(1) Other special considerations and/or notes:	This project is designed as a short to medium term training project that will be absorbed into the Ministry and educational system in the long term. It is the second part of developing training programs to reach rural producers and ensure the delivery of useful information to move from subsistence to commercialization.
2.10 Routine operation and required resources after the completion of the project	
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>Human resources (on-going):</p> <ul style="list-style-type: none"> • 40 Specialists • 120 (training of trainers) senior field trainers in facilities <p>Other on-going costs:</p> <ul style="list-style-type: none"> • Computer equipment • Communication allowances (cell phones and internet) • Transportation allowances (for specialists and field trainers to travel to provide courses). <p>Office maintenance and printing/copy costs.</p>

Part 3: Project cost estimation

Project duration	SSP/USD = 4																																
	Phase 1			Phase 2			Phase 3			Phase 4			Total																				
Cost group	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000	% to total						
1 Management and operation of project																																	
1 Deployment of government staff																																	
1 Print training material																																	
2 Procurement of administrative services (contracted)																																	
1 International consultant (team leader)																																	
2 International consultant (curriculum development)																																	
3 Procurement of professional services (contracted)																																	
1 week TOT in Juba (per diem)																																	
1 week TOT in Juba (per transportation)																																	
1 week training course at each centre (per diem)																																	
1 week training course at each centre (transportation)																																	
4 week training course at each centre (per diem)																																	
4 week training course at each centre (transportation)																																	
3 month training at Juba (per diem)																																	
3 month training at Juba (transportation)																																	
5 Implementation of research, studies and surveys																																	
6 Delivery of extension and training services to the private sector																																	
7 Operation and maintenance																																	
1 Supplies and consumables																																	
2 Construction of infrastructure and procurement of equipment																																	
1 Construction of office buildings																																	
1 Renovation of 6 centres																																	
3 Construction of feeder roads																																	
4 Construction of production, market and transportation facilities																																	
5 Acquisition of land																																	
6 Procurement of vehicles																																	
7 Procurement of equipment																																	
1 Education equipment for 6 centres																																	
3 Subsidies, equity and loans																																	
1 Provision of cash and/or in-kind subsidies																																	
2 Provision of training services to the private sector																																	
3 Equity investments																																	
4 Provision of loans																																	
5 Social assistance/donation (Emergency)																																	
Total (SSP '000)																																	
Total (USD '000)																																	
% to total																																	

Public sector project
Routine work by government
Private sector project
Routine work by private sector

4. Forestry Subsector

4.1 Investment Planning Space

4.1.1 Investment Planning Space by Development Theme

Subsector Development Theme Project ID Project name	Year												SSP ('000)	USD ('000)	Respon- sibility	
	Phase I 2015/16 2016/17 2017/18 2018/19 2019/20 2020/21 2021/22 2022/23 2023/24 2024/25	Phase II 2025/26 2026/27 2027/28 2028/29 2029/30 2030/31 2031/32 2032/33 2033/34 2034/35 2035/36 2036/37 2037/38 2038/39 2039/40	Phase III	Phase IV												
03 Forestry Subsector														1,462,156	365,539	
T1 Reconstruction and recovery														29,859	7,465	
03.01 Forestry sector project preparation facility and sawlog plantations grant scheme fund project														29,859	7,465 N	
T2 Food and nutrition security														32,722	8,181	
03.02 Community forestry, agroforestry and smallholder plantations development project														32,722	8,181 NS	
03.03 Participatory establishment and management of forest reserves project														11,932	2,983 NS	
T3 Economic growth and livelihood improvement														20,790	5,198	NS/SC
03.04 Market development and promotion for commercial forest products project														20,790	5,198 NS/SC	
03.05 Multipurpose Management of Forest Reserves project														181,772	45,443	
03.06 Industrial-Scale Forest Plantations development for log production project														1,816	454 N	
03.07 Fuelwood and Charcoal Value Chains - sustainable production and efficiency improvement project														30,005	7,501 NS	
03.08 Development of industrial processing and manufacturing of timber products project														90,936	22,734 N/PPP/P	
T4 Agriculture sector transformation														14,313	3,578	NS
03.09 Forest-based tourism development project														44,703	11,176 N	
03.10 Integrated upscaling of industrial and outgrower tree plantations and expansion of wood processing for export project														57,729	14,432	
03.11 Mainstreaming "Green-Economy" practices into forestry, forest industries and forest-based tourism project														19,951	4,988 N	
T5 Institutional development														18,849	4,712	N
03.12 National forest resources inventory, information and management plans project														18,849	4,712 N	
03.13 Forest policy and legal framework establishment and maintenance project														18,930	4,732 N	
03.14 Forestry institutional and human resources capacity development project														1,160,073	290,018	
03.15 Establishment of the South Sudan Forest Research Institute project														1,097,671	274,418 N	
														2,983	746 N	
														39,250	9,812 N	
														20,170	5,042 N	



Note: N: National government; S: State government; P: private sector
PPP: Public and private sector partnership

4.1.2 Investment Planning Space by CAADP Pillar

Subsector	CAADP Pillar	Project ID	Project name	Phase												Year	SSP ('000)	USD ('000)	Responsibility									
				Phase I	Phase II	Phase III	Phase IV	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23					2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32
03 Forestry Subsector	P1 Pillar 1: Land and water management	03.01	Forestry sector project preparation facility and sawlog plantations grant scheme fund project	[Stacked bar chart showing investment planning space for this project across phases and years]												25	29,859	7,465 N	NS/SC									
			Participatory establishment and management of forest reserves project	[Stacked bar chart showing investment planning space for this project across phases and years]												10	20,790	5,198 NS/SC										
			Multipurpose Management of Forest Reserves project	[Stacked bar chart showing investment planning space for this project across phases and years]												15	30,005	7,501 NS										
			Mainstreaming "Green-Economy" practices into forestry, forest industries and forest-based tourism project	[Stacked bar chart showing investment planning space for this project across phases and years]												10	18,930	4,732 N										
			National forest resources inventory, information and management plans project	[Stacked bar chart showing investment planning space for this project across phases and years]												25	1,097,671	274,418 N										
			Forest policy and legal framework establishment and maintenance project	[Stacked bar chart showing investment planning space for this project across phases and years]												10	2,983	746 N										
			Forestry institutional and human resources capacity development project	[Stacked bar chart showing investment planning space for this project across phases and years]												20	39,250	9,812 N										
			P2 Pillar 2: Market access																									
			Market development and promotion for commercial forest products project	[Stacked bar chart showing investment planning space for this project across phases and years]												5	1,816	454 N										
			Industrial-Scale Forest Plantations development for log production project	[Stacked bar chart showing investment planning space for this project across phases and years]												13	90,936	22,734 N/PPP/P										
			Fuelwood and Charcoal Value Chains - sustainable production and efficiency improvement project	[Stacked bar chart showing investment planning space for this project across phases and years]												6	14,313	3,578 NS										
			Development of industrial processing and manufacturing of timber products project	[Stacked bar chart showing investment planning space for this project across phases and years]												12	44,703	11,176 N										
			Forest-based tourism development project	[Stacked bar chart showing investment planning space for this project across phases and years]												18	19,951	4,988 N										
			Integrated upscaling of industrial and outgrower tree plantations and expansion of wood processing for export project	[Stacked bar chart showing investment planning space for this project across phases and years]												13	18,849	4,712 N										
P3 Pillar 3: Food supply and hunger																												
Community forestry, agroforestry and smallholder plantations development project	[Stacked bar chart showing investment planning space for this project across phases and years]												15	11,932	2,983 NS													
P4 Pillar 4: Agricultural research																												
Establishment of the South Sudan Forest Research Institute project	[Stacked bar chart showing investment planning space for this project across phases and years]												15	20,170	5,042 N													

Note: N: National government; S: State government; P: private sector
PPP: Public and private sector partnership

4.1.3 Investment Planning Space by Subsector Area/Programme

Subsector Subsector area/programme Project ID Project name	Phase												Year	SSP ('000)	USD ('000)	Responsi- bility
	Phase I 2015/16 2016/17 2017/18 2018/19 2020/21	Phase II 2021/22 2022/23 2023/24 2024/25	Phase III 2025/26 2026/27 2027/28 2028/29 2029/30	Phase IV 2030/31 2031/32 2032/33 2033/34 2034/35 2035/36 2036/37 2037/38 2038/39 2039/40												
03 Forestry Subsector														1,462,156	365,539	
Policy and legal framework development														2,983	746	
03.13 Forest policy and legal framework establishment and maintenance project													10	2,983	746 N	
Public sector institution and management capacity development														108,208	27,052	
03.01 Forestry sector project preparation facility and sawlog plantations grant scheme fund project													25	29,859	7,465 N	
03.11 Mainstreaming "Green-Economy" practices into forestry, forest industries and forest-based tourism project													10	18,930	4,732 N	
03.14 Forestry institutional and human resources capacity development project													20	39,250	9,812 N	
03.15 Establishment of the South Sudan Forest Research Institute project													15	20,170	5,042 N	
Private sector projects and businesses														154,487	38,622	
03.06 Industrial-Scale Forest Plantations development for log production project													13	90,936	22,734 N/PPP/P	
03.08 Development of industrial processing and manufacturing of timber products project													12	44,703	11,176 N	
03.10 Integrated upscaling of industrial and outgrower tree plantations and expansion of wood processing for export project													13	18,849	4,712 N	
Management and conservation of public forests														1,127,676	281,919	
03.05 Multipurpose Management of Forest Reserves project													15	30,005	7,501 NS	
03.12 National forest resources inventory, information and management plans project													25	1,097,671	274,418 N	
Commercial forestry, forest products market														1,816	454	
03.04 Market development and promotion for commercial forest products project													5	1,816	454 N	
Community forestry, agroforestry and smallholder forestry and tree growing on private lands														47,035	11,759	
03.02 Community forestry, agroforestry and smallholder plantations development project													15	11,932	2,983 NS	
03.03 Participatory establishment and management of forest reserves project													10	20,790	5,198 NS/SC	
03.07 Fuelwood and Charcoal Value Chains - sustainable production and efficiency improvement project													6	14,313	3,578 NS	
Management for non-consumptive economic utilisation of forest biodiversity and scenic resources by public and private sectors														19,951	4,988	
03.09 Forest-based tourism development project													18	19,951	4,988 N	

Note: N: National government; S: State government; P: private sector
PPP: Public and private sector partnership

Public sector project
Private sector project
Routine work by government
Routine work by private sector

4.2 Summary of funding requirement

4.2.1 Summary of project cost and scaling-up cost

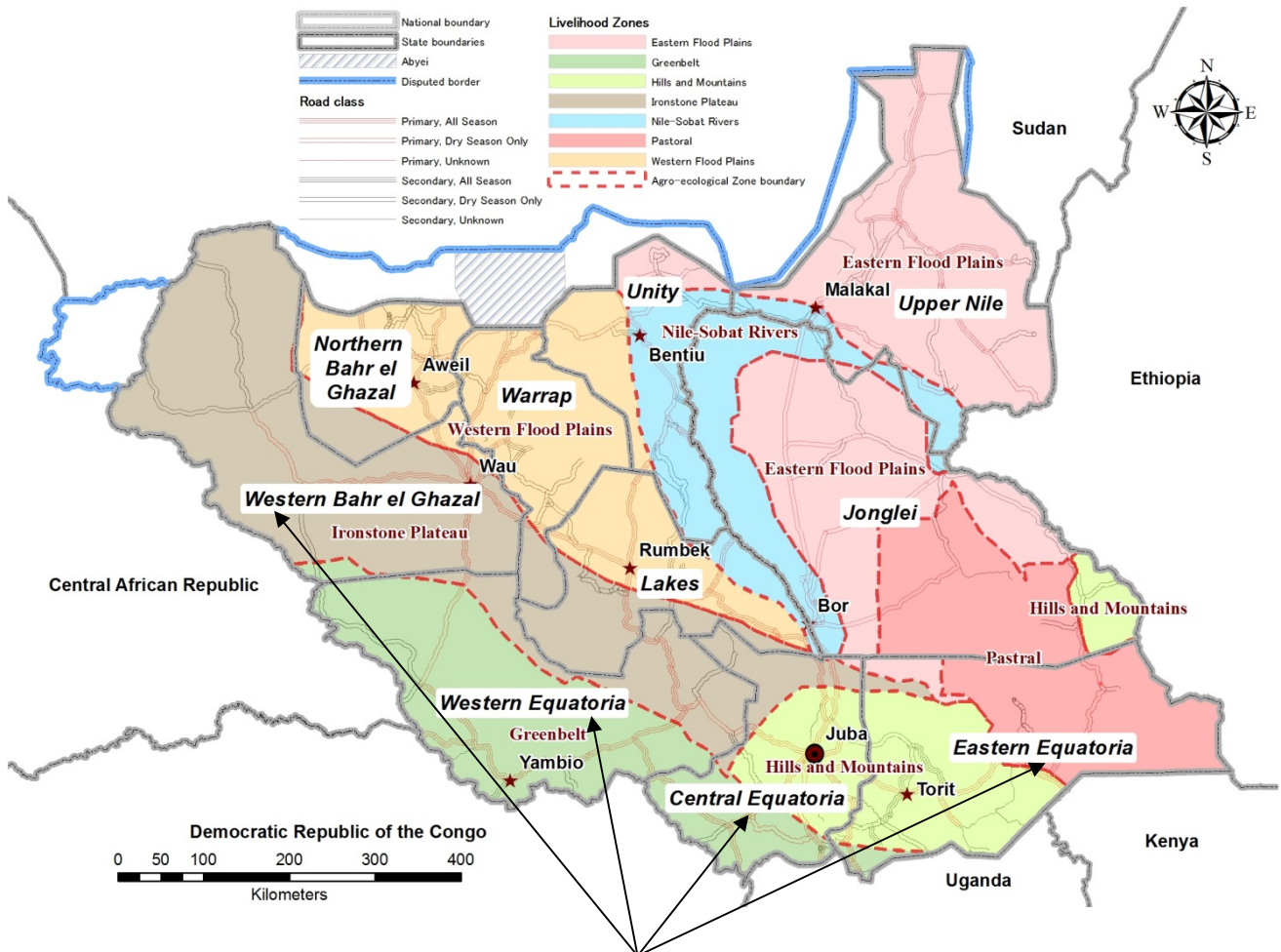
Subsector	Development Theme Project ID	Project name	SSP/USD = 4.00											
			Phase I	Phase II	Phase III	Phase IV	SSP (million)	USD (million)						
00	CAMP Investment Plan total		15/16 16/17 17/18 18/19 19/20	20/21 21/22 22/23 23/24 24/25	25/26 26/27 27/28 28/29 29/30	30/31 31/32 32/33 33/34 34/35 35/36 36/37 37/38 38/39 39/40	4,112.1	1,028.0						
	Project cost		130.6 178.1 333.0 322.9 299.5	316.6 316.4 284.3 255.3 262.2	233.0 204.9 113.1 97.4 115.7	76.4 71.6 66.0 78.9 66.6 61.4 76.6 60.2 46.0 45.4	411.2	102.8						
	Scaling-up cost		0.1 2.2 3.1 13.1 23.5	53.4 74.7 89.8 80.8 90.4	213.0 203.8 360.2 374.4 329.1	469.5 505.4 545.6 513.6 581.9 666.0 689.5 823.6 863.7 915.1	848.5	2,121.3						
	Grand total		130.7 180.2 336.1 336.1 323.0	370.0 391.1 374.0 336.1 352.6	446.0 408.8 473.2 471.8 444.8	545.9 577.0 611.6 592.4 648.5 727.4 766.1 883.8 909.7 960.5	12,597.3	3,149.3						
03	Forestry Subsector		48.6 64.3 75.3 75.2 94.1	69.4 65.0 59.2 59.3 59.0	63.0 65.4 61.0 57.0 83.0	54.3 48.7 47.0 47.0 46.8 44.4 46.5 43.2 42.6 42.6	1,462.2	365.5						
	Project cost		0.1 2.1 2.6 3.1 5.2	6.4 12.4 20.2 17.8 27.8	28.7 22.1 23.2 27.4 29.3	51.9 63.9 86.4 70.5 96.2 123.2 112.7 127.7 143.2 151.8	1,255.8	313.9						
	Scaling-up cost		48.7 66.4 77.9 78.3 99.3	75.7 77.4 79.5 77.2 86.8	91.7 87.5 84.2 84.4 112.3	106.2 112.6 133.4 117.5 143.0 167.6 159.2 171.0 185.8 194.4	2,717.9	679.5						
	Subsector total		1.1 1.4 0.7 0.7 0.7	0.7 0.7 0.7 0.8 1.1	1.4 2.2 3.0 3.0 3.0	1.6 0.8 1.2 1.2 1.2 1.2 1.2 1.2 0.0 0.0 0.0	29.9	7.5						
T1	Reconstruction and recovery		1.1 1.4 0.7 0.7 0.7	0.7 0.7 0.7 0.8 1.1	1.4 2.2 3.0 3.0 3.0	1.6 0.8 1.2 1.2 1.2 1.2 1.2 1.2 0.0 0.0 0.0	29.9	7.5						
	Project cost		1.1 1.4 0.7 0.7 0.7	0.7 0.7 0.7 0.8 1.1	1.4 2.2 3.0 3.0 3.0	1.6 0.8 1.2 1.2 1.2 1.2 1.2 1.2 0.0 0.0 0.0	29.9	7.5						
	Scaling-up cost		1.1 1.4 0.7 0.7 0.7	0.7 0.7 0.7 0.8 1.1	1.4 2.2 3.0 3.0 3.0	1.6 0.8 1.2 1.2 1.2 1.2 1.2 1.2 0.0 0.0 0.0	29.9	7.5						
	Theme total		1.1 1.4 0.7 0.7 0.7	0.7 0.7 0.7 0.8 1.1	1.4 2.2 3.0 3.0 3.0	1.6 0.8 1.2 1.2 1.2 1.2 1.2 1.2 0.0 0.0 0.0	29.9	7.5						
03.01	Forestry sector project preparation facility and sawlog plantations grant scheme fund project		1.1 1.4 0.7 0.7 0.7	0.7 0.7 0.7 0.8 1.1	1.4 2.2 3.0 3.0 3.0	1.6 0.8 1.2 1.2 1.2 1.2 1.2 1.2 0.0 0.0 0.0	29.9	7.5						
T2	Food and nutrition security		0.9 0.5 0.9	5.7 3.5 2.7 3.2 2.8	2.4 2.2 1.7 2.2 2.1	0.8 1.1	32.7	8.2						
	Project cost		0.9 0.5 0.9	5.7 3.5 2.7 3.2 2.8	2.4 2.2 1.7 2.2 2.1	0.8 1.1	32.7	8.2						
	Scaling-up cost		0.9 0.5 0.9	5.7 3.5 2.7 3.2 2.8	2.4 2.2 1.7 2.2 2.1	0.8 1.1	32.7	8.2						
	Theme total		0.9 0.5 0.9	5.7 3.5 2.7 3.2 2.8	2.4 2.2 1.7 2.2 2.1	0.8 1.1	32.7	8.2						
03.02	Community forestry, agroforestry and smallholder plantations development project		0.9 0.5 0.9	5.7 3.5 2.7 3.2 2.8	2.4 2.2 1.7 2.2 2.1	0.8 1.1	32.7	8.2						
	Project cost		0.9 0.5 0.9	5.7 3.5 2.7 3.2 2.8	2.4 2.2 1.7 2.2 2.1	0.8 1.1	32.7	8.2						
	Scaling-up cost		0.9 0.5 0.9	5.7 3.5 2.7 3.2 2.8	2.4 2.2 1.7 2.2 2.1	0.8 1.1	32.7	8.2						
	Project total		0.9 0.5 0.9	5.7 3.5 2.7 3.2 2.8	2.4 2.2 1.7 2.2 2.1	0.8 1.1	32.7	8.2						
03.03	Participatory establishment and management of forest reserves project		0.9 0.5 0.9	5.7 3.5 2.7 3.2 2.8	2.4 2.2 1.7 2.2 2.1	0.8 1.1	32.7	8.2						
	Project cost		0.9 0.5 0.9	5.7 3.5 2.7 3.2 2.8	2.4 2.2 1.7 2.2 2.1	0.8 1.1	32.7	8.2						
	Scaling-up cost		0.9 0.5 0.9	5.7 3.5 2.7 3.2 2.8	2.4 2.2 1.7 2.2 2.1	0.8 1.1	32.7	8.2						
	Project total		0.9 0.5 0.9	5.7 3.5 2.7 3.2 2.8	2.4 2.2 1.7 2.2 2.1	0.8 1.1	32.7	8.2						
T3	Economic growth and livelihood improvement		1.4 4.7 17.3 13.2 41.9	12.2 9.8 7.1 7.6 7.4	7.3 7.9 7.9 3.4 29.2	3.6	181.8	45.4						
	Project cost		1.4 4.7 17.3 13.2 41.9	12.2 9.8 7.1 7.6 7.4	7.3 7.9 7.9 3.4 29.2	3.6	181.8	45.4						
	Scaling-up cost		0.1 0.1 0.6 1.1 2.2	3.4 8.0 14.7 11.5 21.5	15.3 13.1 15.3 19.0 19.0	32.1 42.7 58.5 41.1 55.6 70.0 56.6 67.6 79.2 73.0	721.3	180.3						
	Theme total		1.5 4.8 17.9 14.3 44.1	15.5 17.7 21.8 19.1 28.9	22.6 20.9 23.2 22.4 48.2	35.6 42.7 58.5 41.1 55.6 70.0 56.6 67.6 79.2 73.0	903.1	225.8						
03.04	Market development and promotion for commercial forest products project		0.8 0.6 0.1 0.1 0.2	1.7 2.0 2.0 2.0 2.0	3.4 2.6 2.3 2.3 2.3	2.3 2.3 2.3 2.3 2.3	1.8	0.5						
	Project cost		0.8 0.6 0.1 0.1 0.2	1.7 2.0 2.0 2.0 2.0	3.4 2.6 2.3 2.3 2.3	2.3 2.3 2.3 2.3 2.3	1.8	0.5						
	Scaling-up cost		0.1 0.1 0.6 0.6 1.0	1.7 2.0 2.0 2.0 2.0	3.4 2.6 2.3 2.3 2.3	2.3 2.3 2.3 2.3 2.3	79.5	19.9						
	Project total		0.9 0.7 0.7 0.8 1.2	1.7 2.0 2.0 2.0 2.0	3.4 2.6 2.3 2.3 2.3	2.3 2.3 2.3 2.3 2.3	81.3	20.3						
03.05	Multipurpose Management of Forest Reserves project		2.7 6.1 7.5 6.5	2.6 3.2 0.2 0.3 0.1	0.1 0.6 0.0 0.0 0.0	0.0	30.0	7.5						
	Project cost		2.7 6.1 7.5 6.5	2.6 3.2 0.2 0.3 0.1	0.1 0.6 0.0 0.0 0.0	0.0	30.0	7.5						
	Scaling-up cost		0.1 0.1 0.6 0.6 1.0	1.7 2.0 2.0 2.0 2.0	3.4 2.6 2.3 2.3 2.3	2.3 2.3 2.3 2.3 2.3	127.2	31.8						
	Project total		2.7 6.1 7.5 6.5	2.6 3.2 0.2 0.3 0.1	0.1 0.6 0.0 0.0 0.0	0.0	157.2	39.3						
03.06	Industrial-Scale Forest Plantations development for log production project		0.9 28.1	2.6 3.0 3.3 3.2 3.3	3.3 3.3 3.8 3.4 29.1	3.5	90.9	22.7						
	Project cost		0.9 28.1	2.6 3.0 3.3 3.2 3.3	3.3 3.3 3.8 3.4 29.1	3.5	90.9	22.7						
	Scaling-up cost		0.1 0.1 0.6 0.6 1.0	1.7 2.0 2.0 2.0 2.0	3.4 2.6 2.3 2.3 2.3	2.3 2.3 2.3 2.3 2.3	248.3	62.1						
	Project total		0.9 28.1	2.6 3.0 3.3 3.2 3.3	3.3 3.3 3.8 3.4 29.1	3.5	339.2	84.8						
03.07	Fuelwood and Charcoal Value Chains - sustainable production and efficiency improvement project		0.6 0.6 4.5 1.7 3.6	3.3	6.0 5.3 4.7 4.5 4.5	4.5 4.5 4.5 4.5 4.5	14.3	3.6						
	Project cost		0.6 0.6 4.5 1.7 3.6	3.3	6.0 5.3 4.7 4.5 4.5	4.5 4.5 4.5 4.5 4.5	14.3	3.6						
	Scaling-up cost		0.5 1.1	1.5 5.8 5.2 4.0 4.0	6.0 5.3 4.7 4.5 4.5	4.5 4.5 4.5 4.5 4.5	138.4	34.6						
	Project total		0.6 0.6 4.5 2.2 4.6	4.8 5.8 5.2 4.0 4.0	6.0 5.3 4.7 4.5 4.5	4.5 4.5 4.5 4.5 4.5	152.7	38.2						
03.08	Development of industrial processing and manufacturing of timber products project		0.8 6.6 2.9 3.6	3.6 3.6 3.6 4.0 4.0	4.0 4.0 4.0	8.7 8.1 10.1 9.0 9.5 11.0 10.6 13.2 11.8 15.3	44.7	11.2						
	Project cost		0.8 6.6 2.9 3.6	3.6 3.6 3.6 4.0 4.0	4.0 4.0 4.0	8.7 8.1 10.1 9.0 9.5 11.0 10.6 13.2 11.8 15.3	44.7	11.2						
	Scaling-up cost		0.2 0.2 0.2 0.2 0.2	0.2 0.2 0.2 0.2 0.2	0.2 0.2 0.2 0.2 0.2	8.7 8.1 10.1 9.0 9.5 11.0 10.6 13.2 11.8 15.3	127.9	32.0						
	Project total		0.8 6.6 2.9 3.7	3.7 3.8 3.8 4.2 4.2	4.2 4.2 4.2 4.2 4.2	8.7 8.1 10.1 9.0 9.5 11.0 10.6 13.2 11.8 15.3	172.6	43.2						

Subsector	Development Theme	Project ID	Project name	SSP/USD = 4.00																															
				Phase I	Phase II	Phase III	Phase IV	SSP (million)	USD (million)																										
				15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40							
T4	Agriculture sector transformation																																		
	Project cost			1.5	4.3	0.7	1.7	5.3	3.1	2.6	2.5	7.0	6.0	3.4	3.4	3.7	3.4	1.8	1.8	1.8	1.6	0.6	0.6	0.6	57.7	14.4									
	Scaling-up cost			0.4	0.4	1.2	1.2	3.7	1.5	1.3	1.3	1.3	1.3	1.3	1.3	1.3	2.2	2.2	2.2	2.3	2.4	5.7	6.0	6.3	6.6	7.9									
	Theme total			1.5	4.3	0.7	1.7	5.7	3.5	3.8	3.7	10.7	7.5	4.7	4.7	5.0	8.4	8.5	9.6	11.4	16.9	17.1	19.0	20.2	24.2	144.7	36.2								
	Project cost			1.5	4.3	0.7	1.7	0.7	0.5	0.1	0.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	20.0	5.0									
	Scaling-up cost			0.4	0.4	1.2	1.2	0.4	0.4	1.2	1.2	1.7	1.5	1.3	1.3	1.3	2.7	2.5	2.3	2.3	2.3	3.2	3.2	3.3	3.3	3.3	53.8	13.4							
	Project total			1.5	4.3	0.7	1.7	1.1	0.9	1.3	1.3	2.7	2.5	2.3	2.3	2.3	3.5	3.5	2.3	2.3	1.7	0.8	0.8	0.8	0.6	18.8	4.7								
	Project cost			4.6	2.6	2.5	2.4	4.6	2.6	2.5	2.4	4.6	2.6	2.5	2.4	4.6	2.6	2.5	2.4	2.4	1.1	1.5	1.5	0.2	0.1	18.9	4.7								
	Scaling-up cost			4.6	2.6	2.5	2.4	4.6	2.6	2.5	2.4	4.6	2.6	2.5	2.4	4.6	2.6	2.5	2.4	2.4	1.1	1.5	1.5	0.2	0.1	56.0	14.0								
	Project total			4.6	2.6	2.5	2.4	4.6	2.6	2.5	2.4	4.6	2.6	2.5	2.4	4.6	2.6	2.5	2.4	2.4	1.1	1.5	1.5	0.2	0.1	74.9	18.7								
T5	Institutional development																																		
	Project cost			46.1	58.2	54.9	56.5	49.9	49.1	45.7	45.1	45.1	45.1	45.1	45.1	45.1	44.9	47.0	44.9	44.9	44.9	44.9	44.9	44.9	44.9	1,160.1	290.0								
	Scaling-up cost			2.0	2.0	2.0	3.0	3.0	4.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.5	3.9	3.4	3.4	3.4	3.4	3.4	3.4	3.4	134.6	33.7								
	Theme total			46.1	60.2	56.9	58.5	52.9	52.1	49.7	49.2	49.2	49.2	49.2	49.2	49.2	49.4	51.0	48.3	48.4	48.4	48.4	48.4	48.4	48.4	1,294.7	323.7								
	Project cost			42.1	50.5	48.3	48.3	47.4	46.5	43.1	43.1	42.6	42.6	42.6	42.6	42.6	42.6	44.7	42.6	42.6	42.6	42.6	42.6	42.6	42.6	1,097.7	274.4								
	Scaling-up cost			42.1	50.5	48.3	48.3	47.4	46.5	43.1	43.1	42.6	42.6	42.6	42.6	42.6	42.6	44.7	42.6	42.6	42.6	42.6	42.6	42.6	42.6	1,097.7	274.4								
	Project total			1.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	3.0	0.7								
	Project cost			2.0	2.0	2.0	3.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.4	3.9	3.3	3.3	3.3	3.3	3.3	3.3	3.3	86.1	21.5								
	Scaling-up cost			1.2	2.2	2.2	2.2	3.2	3.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.4	3.9	3.3	3.3	3.3	3.3	3.3	3.3	3.3	89.1	22.3								
	Project total			2.8	7.5	5.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	39.2	9.8								
	Project cost			2.8	7.5	5.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	19.6	4.9								
	Scaling-up cost			1.0	6.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	58.8	14.7								
	Project total			1.0	6.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	20.2	5.0								
	Project cost			1.0	6.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	20.2	5.0								
	Scaling-up cost			1.0	6.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	28.9	7.2								
	Project total			1.0	6.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	49.1	12.3								

4.3 Project Location Map

Nation-wide Projects

- 03.01 Forestry sector project preparation facility and sawlog plantations grant scheme fund project
- 03.02 Community forestry, agroforestry and smallholder plantations development project
- 03.03 Participatory establishment and management of forest reserves project
- 03.04 Market development and promotion for commercial forest products project
- 03.05 Multipurpose Management of Forest Reserves project
- 03.07 Fuelwood and Charcoal Value Chains - sustainable production and efficiency improvement project
- 03.11 Mainstreaming "Green-Economy" practices into forestry, forest industries and forest-based tourism project
- 03.12 National forest resources inventory, information and management plans project
- 03.13 Forest policy and legal framework establishment and maintenance project
- 03.14 Forestry institutional and human resources capacity development project
- 03.15 Establishment of the South Sudan Forest Research Institute project



States Projects (Western Bahr el Ghazal, Western Equatoria, Central Equatoria, Eastern Equatoria)

- 03.06 Industrial-Scale Forest Plantations development for log production project
- 03.08 Development of industrial processing and manufacturing of timber products project
- 03.09 Forest-based tourism development project
- 03.10 Integrated upscaling of industrial and outgrower tree plantations and expansion of wood processing for export project

4.4 Project Profiles

4.4.1 Forestry sector project preparation facility and sawlog plantations grant scheme fund project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Forestry		
(2) Project name:	Forestry sector project preparation facility and sawlog plantations grant scheme fund project		
(3) Project ID:	03.01 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2015/16	Ending FY: 2039/40	Duration (years): 25
(5) Total investment:	SSP 29,859,000	USD 7,465,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FO.SA2	Public Sector Institution and Management Capacity Development	Table 2-3
(2) Government organisation:	07	MAF-FO	Directorate of Forestry	Table 2-6
(3) Activity types:	206	SP-SU	Service delivery and Infrastructure development - Provision of subsidy	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	X
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	X
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	X
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	X
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income		

Items	Information
<p>Part 2: Project description</p>	
<p>2.1 Project justification, objectives, overall description and component structure</p>	
<p>(1) Justification:</p>	<p>The CAMP process has developed profiles for 15 forestry projects for consideration by the Government of South Sudan and by its international partners. The profiles are best considered as appetisers carrying core information to trigger funding interest either domestically (by government, private sector or through public/private partnerships) or externally (through donor public funds or FDI).</p> <p>Expenditure on full elaboration of the profiles into projects is an “overhead” element which not all investors are willing to cover, hence the availability of this project preparation fund. The project is justified by the fact that the lack of small funds to prepare full-fledged projects should not be a reason to lose an investment. Ball-park figures for this funding window would be US\$500,000 to US\$ 700,000 total.</p> <p>This project should provide funding to cover costs of local and international expertise, any additional information search, updating of information on donor areas of preference, and holding of consultative events (with local and investor audiences) to agree on project design etc. The support facility should include capacity to prepare government for any negotiations it may need to have with partners/investors. A critical need in all cases (locally-funded or donor financed projects) is to have well-organised and updated information, and to have on hand a core team of professionals and technicians to assist in preparation of projects; this project will finance such capacity.</p> <p>The expectation should be that government will wish to fund some of the projects itself but may need early funding to elaborate the current project profiles into full-fledged projects. It is also inevitable that all development partners will wish to field and fund most of their own missions to fully elaborate projects that they are interested in. Even private investors would tend to cover all their own costs, given that their money is at stake. However, rare cases may arise where they need supplementary funding that this project should provide.</p> <p>Given that the project already deals with money, the opportunity could be taken to build into it a modest window (ballpark figures would be US\$1.5 to 2.0 million to start) to finance a grant scheme for important programmes such as long-rotation plantations development for sawlogs under the project “<u>Industrial-Scale Forest Plantations development for log production</u>” and the logs component of the project “<u>Community forestry, agroforestry and smallholder plantations development</u>”.</p>
<p>(2) Objectives:</p>	<ul style="list-style-type: none"> • Based on appropriate screening/appraisal, to provide funding and technical support to the elaboration of full-fledged forestry projects under CAMP. • To test through a modest funding window financial grants for long-term plantations to be developed under the following CAMP projects: (a) “<u>Industrial-Scale Forest Plantations development for log production</u>”; and (b) Logs component of the project “<u>Community forestry, agroforestry and smallholder plantations development</u>”. • To keep track of the status of CAMP forestry projects – state of formulation and launch.
<p>(3) Overall description including temporal and spatial extent of project:</p>	<p>The Forestry sector project preparation facility and sawlog plantations grant scheme fund project should be among the first batch of projects to start (in 2015/16) and should operate for 10 years initially. After a possible gap of 8 years, a follow-up phase should come in to start funding projects on value-addition, by which time some plantations would have started yielding material to harvest.</p> <p>The preparation of projects is itself a form of important capacity building for the country; it is therefore essential that the project preparation fund project be embedded in the core government establishment. It is for government and its partners to agree on where best to locate the funding project; the location must allow transparency and reliability of operations and should also facilitate close interaction with the Forestry Directorate’s Forest Economics and Programme Department.</p> <p>For accountability, the funding project should not be decentralised but should operate only at the national level. “Accountability” in this case means more than counting money; the achievements in the field must also be verified before payout. If the features of the scheme are like those in Uganda, quality control safeguards prevented pay-outs without field verification of work done and ensured good quality of planting, care and performance of the crop. The Uganda scheme has also assured equity of access between smallholders and larger planters (the latter get less per unit area) and has achieved participation by both men and women.</p>
<p>(4) Component structure:</p>	<p>Component 1: Collection and organisation of information for full elaboration of forestry projects and maintenance of updated information on status of forestry projects</p>

Items	Information
	<p>elaboration and launch</p> <p>Component 2: Technical support to projects formulation, analysis, screening of funding applications, promotion and negotiation</p> <p>Component 3: Financing window for pilot long-term plantation grant scheme</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Collection and organisation of information for full elaboration of forestry projects and maintenance of updated information on status of forestry projects elaboration and launch.</p> <p>Activity 1: In anticipation of full-fledged project formulation, organise information from CAMP databases/documentation and from outside sources for easier access by formulation teams. Add information on cost levels for project interventions and place for easy access (website).</p> <p>Output: Information base for range of subjects covered by the 24 projects.</p> <p>Activity 2: Tracking state of project formulation and launch.</p> <p>Output: Database and regular newsletter</p> <p>Component 2: Technical support to projects formulation, analysis, screening of funding applications, promotion and negotiation</p> <p>Activity 3: Selection of key project preparation assistance staff (1 graduate; 2 diploma – all already with experience) and their training in project formulation, analysis, negotiation and screening / disbursement of funding of proposals.</p> <p>Output: Competent project team</p> <p>Activity 4: Review and updating of donor priorities in forestry¹⁰⁵ and engagements of South Sudan based donors through their coordination mechanism.</p> <p>Output: Report to brief government on prospective donor areas of interest</p> <p>Activity 5: Preparation, dissemination and training of trainers in use of project preparation guidelines, drawing upon main commonalities of government and development partner requirements.</p> <p>Output: Project preparation guidelines; trainers in place</p> <p>Activity 6: Review and updating of prospective private sector investors in forestry (national, regional, international)</p> <p>Output: Report to brief government; promotional materials; promotional website</p> <p>Component 3: Financing window for pilot long-term plantation grant scheme</p> <p>Activity 7: Development of a Grant scheme and schedule of grants¹⁰⁶ for long-term forestry (available for all sizes of investor). Formulation of incentives for private sector investment.</p> <p>Output: Report drawing on international best practice with design details of a non-complicated and sustainable incentives package which stresses exemptions more than heavy funding disbursements</p> <p>Activity 8: Development and dissemination of guidelines /handbook for grant applications and conditions to qualify under Sawlog Grant scheme.</p> <p>Output: Grant application guidelines and qualifications for applicants</p> <p>Activity 9: Establishment of field support teams: (a) technical extension team – all aspects including fire protection; and (b) field performance evaluation team – including assessing carbon capture records.</p> <p>Output: Support teams numbering 5 staff (extension); 2 (verification); 1 business adviser – all at diploma level</p> <p>Activity 10: Development of proposals based on international best practice for policy incentives for large-scale private investment in plantations¹⁰⁷.</p> <p>Output: Report for presentation to Ministry of Finance/planning and any existing national development bank(s)</p>
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2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:

(2) Description of beneficiaries

<ul style="list-style-type: none"> • Forestry Directorate: Forest Economics and Programme Department (payments would presumably be from the CAMP/IDMP Implementation Coordination Task Team or another mechanism identified by it)
<ul style="list-style-type: none"> • The Forestry Directorate (especially the Forest Economics and Programme

¹⁰⁵ International websites may be updated on this. For example, a first consolidated publication for all EU forestry donors was published in 1998 by the UK's Overseas Development Institute for the EU "The AU Tropical Forestry Sourcebook" editors G. Shepherd, D. Brown, M. Richards and K. Schreckenber. ODI. 1998. ISBN 0 85003 318 7

¹⁰⁶ A useful model from the neighbourhood could be Uganda's Sawlog Production Grant Scheme (SPGS). For further information, see <http://www.sawlog.ug> Grant levels differ between small (up to 500ha) and large (5001-3000ha) investors and initially were available up to 36 months. Now grants are being extended to pruning/thinning. According to version 6 (2010) of the brochure "Sawlog Production Grant Scheme – Frequently Asked Questions", rates (Shillings/ha) for small investors are Year 1: 450,000; Year 1-2: 200,000; Year 2-3: 200,000. For large investors they are Year 1: 300,000; Year 1-2: 150,000; Year 2-3: 150,000.

¹⁰⁷ A review of earlier experiences, of which the most useful could be those for Chile and Brazil, is included in the document "Financing Sustainable Forest Management – Report of the International Workshop of Experts" Oslo, Norway 22-25 January 2001. Centre for International Forestry Research, Bogor, Indonesia. Document ISBN 979-8764-68-4. A more detailed companion volume is "The private sector speaks: investing in Sustainable Forest Management" Eds: Mafa E. Chipeta/Mahendra Joshi. Centre for International Forestry Research, Bogor, Indonesia, 2001. Document ISBN 979-8764-72-2

Items	Information					
within the framework of the project:	<p>Department) would be the most direct beneficiary in terms of updated knowledge and capacity of the project formulation and funding process.</p> <ul style="list-style-type: none"> • The Forestry Directorate and Decentralised state-level counterpart institutions • Donors in terms of a one-stop source of information and counterpart co-operation in project formulation processes • Private sector investors in terms of a one-stop source of information and assistance and of grants if included 					
2.4 Outcomes, impact and contributions to value added (i.e. economic growth)						
(1) Outcomes and impact:	<ul style="list-style-type: none"> • Projects fully elaborated on time and of good quality • Timely launch of interventions • Earlier start of investment in long-term plantations due to grant scheme • If review of policy incentives to forestry investment accepted and acted upon by government, accelerated large-scale investment in forestry, especially plantations. 					
(2) EIRR and/or FIRR, and/or other economic analysis:	<ul style="list-style-type: none"> • To be done at detailed formulation of project 					
2.5 Environmental and social impact, and mitigation measures						
(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: a Positive: c</td> <td> <p>Project:</p> <p>a: is likely to have minimal or little impact on the environment and/or society</p> <p>b: may have an impact on the environment and/or society</p> <p>c: is likely to have a significant impact on the environment and/or society</p> <p>d: will have a significant impact on the environment and/or society</p> </td> </tr> </table>	Negative: a Positive: c	<p>Project:</p> <p>a: is likely to have minimal or little impact on the environment and/or society</p> <p>b: may have an impact on the environment and/or society</p> <p>c: is likely to have a significant impact on the environment and/or society</p> <p>d: will have a significant impact on the environment and/or society</p>			
Negative: a Positive: c	<p>Project:</p> <p>a: is likely to have minimal or little impact on the environment and/or society</p> <p>b: may have an impact on the environment and/or society</p> <p>c: is likely to have a significant impact on the environment and/or society</p> <p>d: will have a significant impact on the environment and/or society</p>					
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Positive)</p> <ul style="list-style-type: none"> • Support to project formulation should, if well done, include strong attention to environmental considerations, alongside economic and social dimensions. • Examples from sawlog grant scheme in Uganda show good access to funds and extension support by smallholders including women and youth. 					
2.6 Monitoring and evaluation for impact measurement						
(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • Existence of an information base and domestic capacity to help formulate forestry projects • Updated information of status of projects' formulation and launches • Publicity on project intervention opportunities to users (public and private, local and international) • Existence of a trial grant scheme for long-term plantations • Review of international best practice on incentives for forestry investment 					
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • As at the starting point (to allow direct comparison) 					
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> • Surveys • Checking documentation 					
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> • Forestry Directorate management • Missions, including government/development partner periodic progress-review missions 					
2.7 Required human resources						
(1) Principle of human resources management:	<p>Management level oversight over project; in addition:</p> <ul style="list-style-type: none"> • Gender sensitive but competency/merit-based selection of counterpart staff (already competent or with good prospects of quick learning) • Assignment of technically competent personnel and juniors able to learn • Efficient and effective engagement of consultants and specialists outside of the government; all external experts to have a trainable counterpart • Sufficient staffing 					
(2) Required human resources in the public sector (Positions, grades and numbers):	<p>Long-term staff:</p> <ul style="list-style-type: none"> • Full time Senior level officer to lead team; preferably an economist to also determine rates of return and to carry out cost/benefit and other analyses • Project formulation officer • Projects promotion and negotiations-support officer • Grants supervisor and team of 3 assistants 					
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Consultants/short-term staff:</p> <ul style="list-style-type: none"> • Technical advisors (planning tasks, initial detailed studies, capacity building requirements assessment) • Volunteers: • Counterparts for government staff to interact with. Could be based in private sector associations • Private sector Chambers to be encouraged to engage. 					
2.8 Risk assessment with respect to project objectives and resources to be applied						
(1) Expected level of risk:	<table border="1"> <tr> <td>M</td> <td>L: Low</td> <td>M: Medium</td> <td>H: High</td> <td>(select an indicator from the list)</td> </tr> </table>	M	L: Low	M: Medium	H: High	(select an indicator from the list)
M	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	<ul style="list-style-type: none"> • Funding for project preparation and for plantation grants would be grant-based and partly in kind; no risk of repayment defaults • The technical projects on plantations would need to certify quality field operations to 					

Items	Information
	allow grants payments so avoiding waste of government/donor funds.

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:

- As in all funding activities, project to be so organised as to ensure separation of functions between preparation of projects, review for funding, approval of funding, and field verification of performance
- Audit arrangements should be in place and deployed at random
- Award of sawlog grants to be transparent, with no single individual, no matter how senior, to make decisions
- No person in the grants approval chain should ever become /be considered indispensable
- The incentives to be developed under Activity 7 (Component 3) should make economic sense (Potential source countries for best practice have been mentioned in the footnote to Activity 7):
 - cover public goods beyond private company gain;
 - catalyse more investment than they cost;
 - are not a major drain on government treasury; and
 - are adapted as forests grow to cover incentives to plant, manage well; and then add value.

2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.

- Oversight by government over full portfolio of forestry projects
- Mainstreaming of long-term grant scheme for plantations in government budget
- Development and implementation of policy incentives for large-scale forestry investments initially focused on plantations.

Part 3: Project cost estimation

Project duration	SSP/USD = 4												Total SSP '000 USD '000	% to total														
	Phase 1			Phase 2			Phase 3			Phase 4																		
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27			27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	
03.01 Forestry sector project preparation facility and sawlog plantations grant scheme fund project																												
1 Management and operation of project																												
1 Deployment of government staff																												
1 Field appraisal (per diem)																												
2 Field appraisal (transportation)																												
3 Monitoring (per diem)																												
4 Monitoring (transportation)																												
2 Procurement of administrative services (contracted)																												
3 Procurement of professional services (contracted)																												
1 International consultant (planning, detail study)	1,080	1,440	721	721	721	721	721	721	721	721	721	721	721	721	721	721	721	721	721	721	721	721	721	721	721	721	9,024	2,256
2 International consultant (capacity building, training)	540	540	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	360	90
3 International consultant (grant scheme development)	540	540	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	360	90
4 Implementation of staff training																												
5 Implementation of research, studies and surveys																												
6 Delivery of extension and training services to the private sector																												
7 Operation and maintenance																												
1 Fuels for field appraisal																												
2 Fuels for monitoring																												
2 Construction of infrastructure and procurement of equipment																												
1 Construction of office buildings																												
2 Construction of research, training and other specialized buildings																												
3 Construction of feeder roads																												
4 Construction of production, market and transportation facilities																												
5 Acquisition of land																												
6 Procurement of vehicles																												
7 Procurement of equipment																												
1 ICT equipment for field support team																												
2 Equipment for field support team																												
3 Subsidies, equity and loans																												
1 Provision of cash and/or in-kind subsidies																												
1 Sawlog grant scheme																												
2 Provision of training services to the private sector																												
3 Equity investments																												
4 Provision of loans																												
5 Social assistance/donation (Emergency)																												
Total (SSP '000)	1,080	1,440	721	721	721	721	721	721	721	721	721	721	721	721	721	721	721	721	721	721	721	721	721	721	721	721	20,800	5,200
Total (USD '000)	270	360	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	20,800	5,200
% to total	4%	5%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	70%	70%

Public sector project
Routine work by government
Private sector project
Routine work by private sector

4.4.2 Community forestry, agroforestry and smallholder plantations development project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Forestry		
(2) Project name:	Community forestry, agroforestry and smallholder plantations development project		
(3) Project ID:	0 3 0 2 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2017/18	Ending FY: 2031/32	Duration (years): 15
(5) Total investment:	SSP 11,932,000	USD 2,983,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FO-SA7	Community forestry, agroforestry and smallholder forestry and tree growing on private lands	Table 2-3
(2) Government organisation :	07	MAF-FO	Directorate of Forestry	Table 2-6
(3) Activity types:	104	ID-IM	Institutional Development – implementation and monitoring	Table 2-12
	203	SP-EX	Service delivery and Infrastructure development - extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	X
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	X
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	X
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sorbat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	X
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>As background to proposing interventions in participatory forestry (i.e. where people play a key role in sustainably managing the resource), it is useful to start by indicating the geographical expanse and significance of forest/woodland/tree resources which are not protected or managed by government and therefore, by default, are open to free access by rural communities and therefore to sound management or abuse by them.</p> <p>Justification: Most Forest is in the Hands of the People and Not Government: According to Table 10.1 in the August 2014 draft CAMP Livelihood Zone Data Book, out of South Sudan's total land area, some 208,157km² (33%) is covered by trees and another 257,236km² (40%) by shrubs. It would thus appear that up to 73% of the country has ecosystems of legitimate (although not exclusive) interest to the forestry sector. Annex 1 to the 2012 Forest Policy lists gazetted forest reserves and these total some 442,600ha (i.e. 4,426 km²)¹⁰⁸ and so equivalent to 2% of the total land under tree cover. At the 2013 South Sudan Investment Conference, the minister responsible for tourism at the time mentioned "18 protected areas, 6 National Parks, and 12 Games Reserves and Bird sanctuaries and other protected areas, covering more than 1 million hectares". It may be safest to assume that this imprecise "more than 1 million ha" amounts to 1.5 million ha. for the wildlife-related areas alone total (15,000km²); when added to the forest reserves area, the grand total – much of which is likely to be in tree-covered areas - is about 19,500km², which is just over 9% of the tree-covered land area and only around 3% of the country's overall size.</p> <p>Subtracting this from the total area of tree-covered land would still leave over 203,730km² of trees not protected by government. In addition, there are 257,236km² of shrubs largely outside protected areas. These numbers, even if not precise, show the absolutely crucial need to engage local communities in managing the main share of forests in South Sudan, which are not in reserves of protected areas but are under common-property regimes; here the role of government is not as owner but potential partner assisting the people closest to the resource to conserve, utilise and manage it sustainably.</p> <p>These huge tree or shrub-covered areas, even if not necessarily in the vicinity of rural community settlements, are "common property" resources which are potentially accessible to people under customary freedom of open access. Here lies the fundamental importance of participatory forestry - the involvement of people in managing forests and trees in various formats that the proposed project should introduce or reinforce.</p> <p>Additional information: Further background on the components on Smallholder tree plantations and on participatory management of non-timber forest products (NTFPs) is in Attachment 1.</p>
(2) Objectives:	<ul style="list-style-type: none"> • To promote engagement of communities in managing forests and tree resources with the aim of ensuring resource sustainability while also contributing to prosperity within the forest's capacity. • To demonstrate approaches and to organise the communities in balanced ways compatible with their preference for group vs. individual effort; traditional family and/or clan vs. more broad association; associations principally for commercial purposes vs. other purposes; plus for engagement beyond managing the resource to also progressively take on value-added processing and trade. • To prioritise engagement of entrepreneurial individuals or groups of them planting woodlots or scattered trees or non-timber products for supply of industrial timber (logs) or other products principally for the market rather than for subsistence. • For all products selected, to assist in linking the tree-growers and/or NTFP growers to potential markets, whether in wood milling or in other markets, directly or through trading businesses. • To build local capacity to sustain development beyond project existence and the ability of government (especially state and/or county) to backstop this.
(3) Overall description including temporal and spatial extent of project:	<p>The project is to run for 15 years from 2017 till 2032; it is assumed that the period 2015-2017 will be used to prepare the project in detail. The components on community forestry and agroforestry and on smallholder plantations will start jointly in 2017/18 while that on NTFPs development will start in 2018/19. The basis for deciding upon distribution of project effort is a delicate balancing between "weight" of tree resources and that of population. Survey data show that in descending order of "trees", the top 5 states have the following shares of national totals:</p>

¹⁰⁸ The CAMP Situation Analysis Report (Tables 12.10 – 12.11) gives a total area for Central/National Forest Reserves as 1.206 million ha (i.e. 12,206 km²); there is inconsistency in date since the report's total for reserved forests is 468,881ha and for those "under reservation" is 365,446ha – the sum being only 834,327ha and not the 1.2 million ha expected. The report is silent on area of state and lower level forest reserves. It can be assumed that forest vegetation dominates these reserves.

Items	Information																																																	
	<table border="1"> <thead> <tr> <th rowspan="2">State</th> <th colspan="2">Share of National Total</th> <th rowspan="2">Population-Based Weight</th> <th rowspan="2">Weighted Forest Area equivalent</th> <th rowspan="2">Ranking of Participatory Forestry Effort</th> </tr> <tr> <th>Tree cover (Km²%)</th> <th>Population (No/%)</th> </tr> </thead> <tbody> <tr> <td>Western Bahr el Ghazal</td> <td>72,582 / 34.9</td> <td>333,431 / 4.0</td> <td>1.00</td> <td>72,582</td> <td>2</td> </tr> <tr> <td>Western Equatoria</td> <td>43,446 / 20.9</td> <td>619,029 / 7.5</td> <td>1.87</td> <td>81,244</td> <td>1</td> </tr> <tr> <td>Central Equatoria</td> <td>16,459 / 7.9</td> <td>1,103,592 / 13.3</td> <td>3.33</td> <td>54,808</td> <td>4</td> </tr> <tr> <td>Jonglei</td> <td>15,513 / 7.5</td> <td>1,358,602 / 16.4</td> <td>4.10</td> <td>63,603</td> <td>3</td> </tr> <tr> <td>Northern Bahr el Ghazal</td> <td>15,699 / 7.5</td> <td>720,898 / 8.7</td> <td>2.17</td> <td>34,067</td> <td>5</td> </tr> <tr> <td>Lakes</td> <td>15,267 / 7.3</td> <td>695,730 / 8.4</td> <td>2.10</td> <td>32,060</td> <td>6</td> </tr> </tbody> </table>						State	Share of National Total		Population-Based Weight	Weighted Forest Area equivalent	Ranking of Participatory Forestry Effort	Tree cover (Km ² %)	Population (No/%)	Western Bahr el Ghazal	72,582 / 34.9	333,431 / 4.0	1.00	72,582	2	Western Equatoria	43,446 / 20.9	619,029 / 7.5	1.87	81,244	1	Central Equatoria	16,459 / 7.9	1,103,592 / 13.3	3.33	54,808	4	Jonglei	15,513 / 7.5	1,358,602 / 16.4	4.10	63,603	3	Northern Bahr el Ghazal	15,699 / 7.5	720,898 / 8.7	2.17	34,067	5	Lakes	15,267 / 7.3	695,730 / 8.4	2.10	32,060	6
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	<p>In effect, a fair ranking emerges, in that in the states with fewer people, pressure on forests could be less and need to engage people to participate is less urgent than where population pressure is higher and more non-reserved forest has been lost. It is proposed that the project start for the first 3 years in states that contrast in population density among the top 5 in forest cover, as follows (population density in brackets):</p> <ul style="list-style-type: none"> • LOW population density: Western Bahr el Ghazal (3.6 people/km²) • MEDIUM population density: Jonglei (11.0 people/km²) • HIGH population density: Northern Bahr el Ghazal (24.2 people/km²) 																																																	
	<p>This selection can be adjusted to allow inclusion of one state where a valuable type of tree is particularly prevalent in the ecosystem (e.g. gum acacia; Shea etc). The project can thereafter expand to another three states. Participatory forestry takes a lot of close attention; it is not recommended for the project to cover all ten states at any time.</p>																																																	
	<p>Forms of Peoples' Engagement in Forest Management: The project could embrace and promote some or all of the following formats for people's participation: formally as village or multiple-village community groupings for both subsistence and enterprise; as individuals with subsistence needs; as associations of private agents interested perhaps in commercial use of the forest resource; or as individuals with entrepreneurial ambitions. The engagement can involve:</p> <ul style="list-style-type: none"> • Establishing own community reserves or co-managing government forests and therein protecting and sustainably harvesting timber and non-timber forest products (NTFPs) in natural forests generally; • protecting and sustainably harvesting forests that are especially rich in commercial timber species or in gum acacia (<i>Acacia spp</i>) or Shea (<i>Vitellera spp</i>) etc; • enrichment planting of parts of the forest or woodland; • carving out parts of the forest for plantations of fast-growing timber species or fruit trees; • taking selected tree species out of the forest or bringing in exotics and planting them instead in the cropping or grazing landscape; • managing (NTFPs) either in the wild or artificially planted in the forest or in gardens; or • grazing livestock in the forest instead (or even growing crops in parts of the forest and/or woodland – as in taungya systems). 																																																	
	<p>The scope of participation is thus vast. In other countries, it takes two main forms: (a) management of forests or of planted tree resources by the community (wholly or partially in groups or by individuals); or (b) joint management of nearby protected government forests by the community and government. The former is generally labelled "Community-Based Forest Management (CBFM)" and the latter "Joint Forest Management (JFM)". In South Sudan, given that the resource that is reserved and protected by government is minute compared to that in open access status, "participatory forestry" must necessarily be dominated by actions to manage non-reserved forests and trees, including trees integrated into cropping and livestock rearing. Thus CBFM rather than JFM will be the norm and JFM the exception.</p>																																																	
	<p>In designing project interventions, we should perhaps be guided by the economic philosophy of government, which is to create a prosperous South Sudan founded on enterprise and with room for individual private initiative. This suggests a need for South Sudanese participatory forestry not to be focused on meeting "survival/subsistence" needs. There should be room for communities and local business-people to make money, including serious forest-based business.</p>																																																	
	<p>Community Options to Exercise: We should also recognise the cultural preference of communities: whether collaborative community effort is more common than individual effort or otherwise; if communal effort occurs, whether it is family and/or clan dominated or is set at higher level than this; the manner of engaging government procedures in formalising collaborative efforts – if formalisation is common at all; experience of "voluntary coalitions" of relatives or non-relatives partnerships for entrepreneurial ventures</p>																																																	

Items	Information
	<p>etc. Some of these dimensions can only be studied well enough during project implementation; at this planning stage, it is sufficient to build in flexibility and to avoid blueprints in approaches to participatory forestry, even if they have succeeded elsewhere in the world.</p> <p>A key consideration is that the manner in which roles are differentiated by gender, age, or preference for collective as opposed to individual engagement will vary in each location. Data and information used in preparing for programme launch should therefore be adequately disaggregated to allow adaptation to approaches.</p> <p>In this project, preference will be given to forest and tree or NTFP-based activities which can generate significant income and employment and not just upgrading everyone to less severe poverty. On the basis that three original projects were directed at boosting production for community income and employment through participatory means, this project combines the following three projects: "<u>Community forestry and agroforestry development</u>"; "<u>Development of community and smallholder timber plantations and on-farm tree-growing</u>" and "<u>Participatory development of selected non-timber forest products</u>". Three areas of production will be on offer, in all or some of which communities as groups or individuals may choose to participate:</p> <ul style="list-style-type: none"> • management of trees and forests and/or woodlands or engaging in agroforestry; • people engaging on their own land or in community reserves in smallholder tree planting especially for logs to feed the wood-processing industry; and • people engaging in activities on their own land or in community reserves in smallholder planting of NTFPs (including on farms) or managing natural forests (community reserves) for NTFP production. <p>Any of these three areas of production can also be done in neighbourhood forest reserves under JFM, provided the community and the government have so agreed.</p>
(4) Component structure:	<p>Component 1: Support to a participatory forestry development programme (community and/or individual) with attention also to trees in the agricultural landscape – applying agroforestry and other technologies</p> <p>Component 2: Support to smallholder tree planting for the wood processing sector</p> <p>Component 3: Support to development of selected NTFPs with promising economic prospects</p> <p>Component 4: Review of institutional arrangements and capacity in each value-chain and estimation of support needs. Based on findings, support (including training) to development of value-chain organisations for production, processing and marketing (both domestic and export)</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>The project will start operations at 5 sites in three states with contrasting resource and/or population-pressure situations for which a point of departure in deciding is given under section 2.1(2). The components below will be implemented in a pragmatic manner, given that each community is unique and blueprints cannot work; lessons from elsewhere should be about principles, with all specific procedures to be adapted to circumstances:</p> <p>Component 1: Support to a participatory forestry development programme (community and/or individual) with attention also to trees in the agricultural landscape – applying agroforestry and other technologies</p> <p>Activity 1: Plan a participatory forestry development programme to cover the range of approaches from community reserves, joint management and on-farm tree and non-timber products growing. Within it, plan in detail the activities of this project, taking account of gender-differentiated roles.</p> <p style="padding-left: 40px;">Confirm natural forest resource and/or population attributes, study interfaces between trees and farming systems, and study traditional and modern experiences nationwide and decide on project activity locations based on this.</p> <p style="padding-left: 40px;">Assess local community attitudes and capacity and government capacity to support participatory forestry and work out capacity-building needs including early training.</p> <p style="padding-left: 40px;">Based on the above, design an indicative national programme for participatory forestry and within it fully elaborate this project - in detail for the first five years and in more indicative terms thereafter.</p> <p style="padding-left: 40px;">Output: National Plan for participatory forestry development; Detailed plan for this project for 5 years, with indicative plan for follow up phase(s)</p> <p>Activity 2: In the selected locations, launch pilot participatory forestry and tree and/or NTFP growing activities in the agricultural landscape – applying agroforestry and other technologies - and provide extension and organisational support</p> <p style="padding-left: 40px;">With focus on locations in the three states selected for first intervention, propose in detail extension support arrangements, including co-operation with agricultural extension and networking among many extension support</p>
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Items	Information
	<p>providers¹⁰⁹. Given desire to include a business orientation, Identify sources of extension support to business development for the value chain from forest and/or farm to market. With full recognition of kinship-and chieftainship-based traditional arrangements for self-organisation, establish links with government agencies responsible for co-operatives and related organisations to design and implement support in organising communities¹¹⁰, small and medium businesses, and individuals for effective participation. Output: An extension plan, including support to entrepreneurship development; Plan for effectively organising communities Activity 3: Prepare and keep updated management plans for community project activities and forest and/or tree resources and provide oversight and quality control for plans prepared by private parties Output: Community management plans and overseen private management plans Activity 4: Implement pilot activities Output: Forest management, tree and NTFP growing activities underway</p> <p>Component 2: Support to smallholder tree planting for the wood processing sector through community level afforestation and farmland tree-growing (outgrowers, household woodlots, linear tree planting etc) Activity 5: Prioritization, review and planning of smallholder scale tree planting opportunities to produce for the wood processing sector, based on the application of criteria for selecting first sites (including location links to sites for the commercial-scale log-production and to processing mills). Output: Report with prioritised list of sites¹¹¹; Workplan for tree-planting primarily for sawlogs on the first 5 sites of intervention (in collaboration with related projects) Activity 6: Promotion of outgrower schemes and other non-industrial scale smallholder log production Output: Provisional guidelines for outgrower arrangements and outline agreement between contracting parties; outline of incentives for outgrower schemes; workplan for technical support to outgrowers Activity 7: Extension support to smallholder tree planting Selection, training and deployment of promoters and/or animators and trainers (to match clients in gender) and implementation of field activities in 5 first sites and backstopping of state level activities. Development of a promotional and/or publicity plan and materials for the programme at national and state levels. Output: Extension support activated for implementation of pilots; Extension materials Activity 8: Assistance to organization of smallholders for log production, log marketing and for eventual local community participation in smallholder processing industry Selection, training and deployment of promoters focused on rural organisations and enterprise management Assistance to creation or strengthening of groups including training, development of agreed institutional formats, "business plans", codes of behaviour Output: Tree-planting groups improved or new ones established and functional; Trained organisational mobilisers in place</p> <p>Component 3: Support to development of selected NTFPs with promising economic prospects. A key challenge for NTFPs is that they are too many and that the forestry literature often gives the impression that they are all very important and often even more important than wood. This may be the case in a few instances but in order to effectively support their effective economic contribution, it is necessary to select a few promising ones so that efforts are not inordinately dispersed over too much ground. Activity 9: Preliminary national value-chain study of selected NTFPs to understand and/or characterise size, development trends, organisation, drivers of change followed by prioritization for selective large-scale promotion under the project. Broad assessment of each value chain to update knowledge of size, organisation, main players, trends and their drivers, prospects and challenges. – pay specific attention to gender roles.</p>

¹⁰⁹ e.g. where many NGOs operate, confusion can arise if all operate in very different ways unless the government offers coordination.

¹¹⁰ Organisations are critical for success because it is not practical for the government to service scattered individuals. Organisations (most likely a combination of traditional clan/chief arrangements and government) can empower people to mobilise for collective effort; establish community forest reserves or plantings; agree on codes of conduct and sanctions for their breach; negotiate/collectively bargain for better procedures with government and companies nearby; negotiate better and more stable prices for their products and for inputs; protect themselves from divisive traders and investors; enforce obligations to protect the resource including by replanting; control abuse or unfair behaviour in harvest etc; minimise divergence in approaches of external aid agents, e.g. NGOs; and protect the weak subsistence users. For people in processing and trade, organisations can also develop shared services, including SACCOs for member savings and loans.

¹¹¹ A "site" can be a number of neighbouring communities, not necessarily just one village, for example.

Items	Information
	<p>Specific assessment on mushrooms to determine magnitude, trends and drivers of demand; potential dynamism.</p> <p>Development and application of criteria for selecting first sites and for piloting NTFP project and preparation of provisional workplan.</p> <p>Confirmation of status, productivity, property rights and commercial potential of forest resources for NTFP production, for which USAID baseline information exists in the case of Gum acacia and Shea.</p> <p>Output: Report on selected value-chains – give reasons for retention or exclusion from among candidates which include shea, Gum acacia, Bamboo, Bush Meat, Honey, Palm Oil;¹¹². Shortlist of potential project sites for decision. Scoping report on potential of mushroom NTFP value-chain for possible future inclusion in project]</p> <p>Activity 10: Workplan preparation for project's NTFP activities.</p> <p>Detailed profiling of traditional or existing practices in growing the NTFP and extent to which domesticated.</p> <p>Detailed profiling of markets and marketing.</p> <p>Detailed profiling of processing segment of value chains.</p> <p>Assessment of leading players and sub-sector organisation</p> <p>Workplan organisation and consultation with communities</p> <p>Output: Final project workplan</p> <p>Activity 11: Support to implementation of NTFP production and the value chain.</p> <p>In the initial pilot sites</p> <p>technical support to improving productivity in the field and expanding output of promising non-timber forest products; provision of inputs as needed; e.g. quality seedlings, new varieties; nurseries established; beehives established; tools and equipment; credit;</p> <p>support to processing improvement (productivity, quality, cost-effectiveness, hygiene (in case of food NTFPs)); production sheds; tools and equipment for production, quality control; credit; packaging materials; quality control.</p> <p>support to marketing segment of each value chain; market information; publicity and/or advertising; storage sheds; transport contracts or equipment; inventory credit; storage and/or display; sales facilities in urban areas; reliability of delivery and stability of quality; networking.</p> <p>Output: Project pilot activities underway</p> <p>Component 4: Review of institutional arrangements and capacity in each value-chain and estimation of support needs. Based on findings, support (including training) to development of value-chain organisations for production, processing and marketing (both domestic and export).</p> <p>Activity 12: Assessment of organisations in value chains to identify weaknesses and/or gaps.¹¹³ Gender-sensitive determination of training requirements</p> <p>Output: Report on institutions and their capacity; recommendations for institutional organisation and for training</p> <p>Activity 13: Selection, training and deployment of promoters – both men and women - focused on strengthening or creating rural organisations and enterprise management.</p> <p>Output: Trained organisational mobilisers in place</p> <p>Activity 14: Assistance to create or strengthen groups including training, development of agreed institutional formats, “business plans”, codes of behaviour</p> <p>Output: Stronger NTFP value-chain participants’ groups in place</p> <p>Activity 15: On the job and formal training of workers and supervisors in the value chains - Planning and implementation of training courses, focus on short courses rather than long-term and a few fellowships for diploma and undergraduate levels.</p> <p>Output: Skilled staff</p> <p>Activity 16: Fund construction or modification of suitable premises¹¹⁴ (able to accommodate both male and female candidates) and purchase and install all necessary equipment and knowledge products for support to participatory forestry, including agroforestry - as a minimum for the University of Juba and the Kagelu Forestry Training Centre.</p> <p>Output: Premises; equipment for training; well stocked libraries</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:

- Government’s Agroforestry and Forestry Extension Department will be the key service provider and will orchestrate the state equivalent units to be lead service providers at state and county levels.
- There are related ongoing projects; as of now none in forestry is known but projects

¹¹² Of which honey is claimed by the livestock sector; palm oil by the crops sector.

¹¹³ Capacity-building should look at more than managing the forest or growing trees / NTFPs in the field; it should also attend to business development in processing and marketing.

¹¹⁴ An important need could be training venues for many short courses: these could be modest-cost structures constructed at existing (agricultural?) training centres in three states.

Items	Information
(2) Description of beneficiaries within the framework of the project:	<p>such as the EU/GIZ agricultural extension project in Bahr el Ghazal would be relevant. USAID and SNV in particular are promoting gum acacia and Shea, which could interface with this project.</p> <ul style="list-style-type: none"> • NGOs may prove helpful but business promotion organisations in government and outside it should be canvassed. • Beneficiaries of the project will especially be rural communities and private stakeholders in forestry or agroforestry. Government will gain primarily from capacity-building. • Small-scale tree-grower entrepreneurs and groups of them in communities • Small-scale NTFP producers, marketers and/or entrepreneurs and groups of them in communities

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<ul style="list-style-type: none"> • Sustained management of neighbourhood resources, agroforestry activities and intensified smallholder plantings in all selected sites; • More engagement of local people in value-chain business; • Reduction in poverty levels. • Some partnerships between smallholders and plantation and/or processing companies for subcontract arrangements • Impact: expanded wood and NTFP supply.
(2) EIRR and/or FIRR, and/or other economic analysis:	<ul style="list-style-type: none"> • To be done at detailed formulation of project

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td style="vertical-align: top;"> Negative: a Positive: c </td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: a Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
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(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Positive)</p> <ul style="list-style-type: none"> • Through better management of their natural tree resources and more knowledge-based integration of trees with agriculture, local communities can improve their environment in practice. • Plantations or trees planted in the farm landscape reduce pressure on ecologically complex and biodiverse natural forests and can themselves be established and managed in an environmentally sound manner. • Project specifically calls for balance in attention to all stakeholders by gender, age, whether subsistence or entrepreneurial etc. 		

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • Examples of community forest reserves • Number of people and groups engaged in planting trees or NTFPs on own land for selling • Number and condition of trees planted by people and groups on own land for selling • Local community organisations focused on the forests value chain • Extension capacity for forestry and agroforestry • Sustainable community-level forestry value-chain businesses significantly involving local people • Incomes from tree growing on smallholder land • Stability and symptoms of profitability of NTFP enterprises
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • Same as at the start
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> • Baseline mission and consultant surveys.
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> • Directorate of Forestry's internal M&E; donor/Government periodic review missions including at end of Phase I

2.7 Required human resources

(1) Principle of human resources management:	<p>Management level oversight over project; in addition:</p> <ul style="list-style-type: none"> • Gender sensitive but competency and/or merit-based selection of counterpart staff (already competent or with good prospects of quick learning) • Assignment of technically competent personnel and juniors able to learn • Efficient and effective engagement of consultants and specialists outside of the government; all external experts to have a trainable counterpart • Sufficient staffing for field assessments and other tasks • Sufficient staffing for adequate follow-up to smallholder tree and/or NTFP planting
(2) Required human resources in the public sector (Positions, grades and numbers):	<p>Long-term staff:</p> <ul style="list-style-type: none"> • Senior staff as project manager • 3 Leaders (diploma level) for general operations; for tree planting for logs; and for NTFPs • Head of extension coordination • Training leader

Items	Information
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<ul style="list-style-type: none"> • Core extension teams: 1 (certificate level) and 2 assistants at each site, of which one most focused on business management • Administrative support team <p>Paid consultants/short-term teams: the focused short-term experts come when each area of participatory development is launched and selectively for follow-up:</p> <ul style="list-style-type: none"> • Business development advisers • International best-practice consultants [12 months over whole 5 year project] • Specialised skilled workers (20 months over whole project) to assist, especially in processing. Community hosting of research sample plots in community-level reserves and/or plantation areas. <p>Volunteers:</p> <ul style="list-style-type: none"> • Representative of associations of private sector firms that would buy smallholder logs or subcontract tree and/or NTFP planting (for easy liaison) • Representative of NTFP sellers (to which smallholders would sell)

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:

L	L: Low	M: Medium	H: High	(select an indicator from the list)
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(2) Explanation of expected risks:

- Implementation of the project itself faces very low risk.
- Initial problems in getting to fully understand the specifics of each locality so as to adapt known best practice
- Diversity of intervention approaches, especially where many NGOs operating.
- A key risk is mismanagement of cash grants through corruption by public servants

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:

- Finding staff with interest in and aptitude for rural work
- How to deal with claims that there is a very high tradition of individualism in rural society, except where cooperation is kinship-based
- Need for learning partnerships: there may be some within South Sudan, e.g. the UNEP project co-funded by government, DFID and Norwegian People's Aid "*South Sudan Pilot Community Forestry Project – Ifwoto and Lainya Payams*". For external partnerships, there is need to avoid copying the practices of others (of which the UNEP project has summarised examples from Kenya, Malawi, Mozambique and Tanzania) without adaptation:
 - In the subregion:
 - a) There are no good examples of participatory forestry that improves much on subsistence life (Rwanda possibly has examples of ambition beyond subsistence) Tanzania has valid experiences but has a strong socialist background.
 - Uganda is applying cash incentives to smallholder tree growers some of which could be adapted to SS participatory forestry;
 - Ethiopia has huge food-for-work participatory forest replanting projects – but they are food-aid and cash payment dependent
 - Further afield:
 - Asia is well known but cultural differences are great, especially traditions of working together
 - Regional Community Forestry Training Centre at Kasetsart University (Thailand) is a worthwhile centre of excellence for training in participatory forestry
 - India is an acknowledged leader but is culturally very distinct
 - Donor backstopping:
 - funding partner could foster partnership with a lead competence in participatory forestry in own country
 - Global knowledge:
 - Links to FAO, ICRAF but both focus on subsistence-level participation.
- The smallholders will be easier to service if they are organised: efforts to help them do this are essential. Some challenges relevant to the project, many of which are worsened by the fact that rural people are not organised, could include:
 - a) Common-property status of resources so that harvest is uncontrolled;
 - Poor clarity in division of responsibilities (even for harvest licensing) between government and traditional chief at Payam and Boma or lower levels
 - Abuse of common-property resources for commercial gain, even well-connected foreigners are reported to be cutting trees for timber, fuelwood and charcoal, including gum acacia and Shea trees
 - Abuse of market power and unshared knowledge by traders to exploit rural producers
 - Limited community experience in cooperating with others beyond kinship confines (family, clan) for joint work and for sharing benefits
 - In case of forest reserves, focus of local rights on subsistence level only
 - New forest policy is lacking in details related to participatory forestry and on non-timber products of forests that could have commercial value
 - No specific incentives for informal investment which participatory forestry consists of (before the CPA there were incentives but all of them were only feasible for formal businesses)

Items	Information
	<p>Perception of agroforestry appears limited to integrating trees in the agricultural landscape ignores already prevalent grazing of livestock in forests and/or woodlands</p> <p>Uncontrolled bush fires</p> <p>Poor road access and distant markets for marketable products, scattered production that needs aggregation worsens unit costs</p> <p>No tradition of replanting what one cuts (even for gum acacia which is not regenerating well enough)</p>

2.10 Routine operation and required resources after the completion of the project

<p>(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.</p>	<ul style="list-style-type: none"> • Continuation of all ongoing extension support to participatory forestry; • Maintenance and use of the facilities, especially for training; • Keeping staff updated in their professional knowledge; • Knowledge-dissemination products: newsletters, papers, publications etc. • Government staff expanded to cover more areas; management of support scheme; research support
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Part 3: Project cost estimation

Project duration	SSP/USD = 4												Total	% to total														
	Phase 1			Phase 2			Phase 3			Phase 4																		
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27			27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	
03.02 Community forestry, agroforestry and smallholder plantations development project																												
Project duration																												
1 Management and operation of project																												
1 Deployment of government staff																												
1 Monitoring/supervision (per diem)	720	540	703	884	164	164	164	704	164	164	704	164	164	704	601	780	1,050								8,212	2,053	69%	
2 Monitoring/supervision (transportation)			30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30								390	98	3%
3 Procurement of professional services (contracted)			18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18								234	59	2%
4 Procurement of administrative services (contracted)			12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12								156	39	1%
5 Procurement of professional services (contracted)			720	540	670	850	130	130	670	130	670	130	670	570	750	1,020								7,780	1,945	65%		
6 Procurement of professional services (contracted)			540	540	540	540	540	540	540	540	540	540	540	540	540	540	540								4,320	1,080	36%	
7 Procurement of professional services (contracted)			180	180	180	180	180	180	180	180	180	180	180	180	180	180	180								1,080	270	9%	
8 Procurement of professional services (contracted)			130	130	130	130	130	130	130	130	130	130	130	130	130	130	130								1,560	390	13%	
9 Procurement of professional services (contracted)																									480	120	4%	
10 Procurement of professional services (contracted)																									240	60	2%	
11 Procurement of professional services (contracted)																									100	25	1%	
2 Construction of infrastructure and procurement of equipment																												
1 Construction of office buildings																												
1 Houses in pilot sites	150																								1,900	475	16%	
2 Field offices at pilot sites																									260	65	2%	
3 Stores at pilot sites																									200	50	2%	
2 Construction of research, training and other specialized buildings																												
1 Stores at pilot sites																									60	15	1%	
2 Stores at pilot sites																									30	8	0%	
3 Construction of feeder roads																												
1 Pick-up for whole project																									1,170	293	10%	
2 Motorbikes for preparation work	150																								300	75	3%	
3 Motorbikes for resident extension workers																									10	3	0%	
4 Bicycles for pilot sites																									100	25	1%	
5 Lorry for pilot implementation																									10	3	0%	
6 Truck for pilot implementation																									400	100	3%	
7 Pick-ups for pilot implementation																									200	50	2%	
7 Procurement of equipment																												
1 ICT equipment																									150	38	1%	
2 Field survey tools, equipment																									440	110	4%	
3 Materials for community nurseries																									20	5	0%	
4 Training materials equipped at training institute																									4	1	0%	
3 Subsidies, equity and loans																												
1 Provision of cash and/or in-kind subsidies																												
1 Provision of cash and/or in-kind subsidies	164	164	164	164	164	164	164	164	164	164	164	164	164	164	164	164	164								1,820	455	15%	
2 Provision of cash and/or in-kind subsidies	164	164	164	164	164	164	164	164	164	164	164	164	164	164	164	164	164								1,800	450	15%	

03.02 Community forestry, agroforestry and smallholder plantations development project (cont.)

SSP/USD = 4

Project duration	Phase 1		Phase 2		Phase 3		Phase 4				Total																			
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000	USD '000	% to total		
1 Tools, equipment for pilot activities				164	164	164	164	164	164	164	164	164	164	164	164															
2 Provision of training services to the private sector																														
1 Training for stakeholders																														
3 Equity investments																														
4 Provision of loans																														
5 Social assistance/donation (Emergency)																														
T total (SSP '000)			870	540	929	2,183	368	368	908	530	423	908	368	908	765	780	1,086													
T total (USD '000)			218	135	232	546	92	92	227	132	106	227	92	227	191	195	272													
% to total			7%	5%	8%	18%	3%	3%	8%	4%	4%	8%	3%	8%	6%	7%	9%													

Public sector project
Routine work by government
Private sector project
Routine work by private sector

Attachment 1: Justification and Rationale of Project Activities on Smallholder Plantations and on NTFPs

Project Activities on Smallholder Plantations

The production of logs is to be promoted on a commercial scale through the project "*Industrial-Scale Forest Plantations development for log production*". That activity will create income and employment. But there is a more direct complementary way to engage smallholders and communities in log production on their own account, growing the timber in small lots near households, scattered in the agricultural landscape, even as roadside trees. Some smallholders may choose to grow trees on behalf of a large company, as contract outgrowers. A large company is likely to have processing capacity so that an assured market exists. In philosophical terms, and just as set out for the community forestry and agroforestry components of this project, the activities on smallholder plantations and NTFPs are justified not just as a way to keep the poor a little busy and "gently poor", but to give, at least some of them, meaningful income and opportunities to prosper.

The SSDP is clear: a top criterion for prioritizing public expenditure is the "potential for quick poverty-reducing growth". This project, encouraging participation in growing wood for industrial processing, is one area of opportunity. This project has potentially good synergies with the project "*Industrial-Scale Forest Plantations development for log production*". Key advantages would be the strong linkages to the local economy; sharing of organisational arrangements for social cohesion among producers and small enterprises; joint negotiating power with external buyers and service providers etc, as outlined for the community forestry project.

It is recommended, however, that as many as possible of the sites for this project be located close to urban centres which would be an alternative outlet for wood as fuelwood/charcoal and poles (for construction, farm-fencing etc); this would offer a counter-bargaining option against sawmillers who might otherwise abuse their "sole-outlet" monopoly status in very rural areas.

Project Activities on Participatory Development of Selected Non-Timber Forest Products (NTFPs)

South Sudan's most famous non-timber forest products (NTFP) are gum acacia and shea, which come from trees; another is honey, which can be raised without tree cover. "Bush meat" is insufficiently documented but in localities where uncontrolled hunting has not yet decimated stocks, could be an important NTFP, although there could be conservation concerns. Bamboo is probably grown nationwide, although most is in the Equatorias. It is a good and strong structural construction material which is now harvested entirely from natural stock; it could however be grown in many parts of the country and so be more easily accessible to consumers than poles and timber. Less often mentioned is palm oil, which grows naturally in the mist-forest extension of the Congo Basin ecosystem (Western Equatoria and somewhat less in Central Equatoria). The Oil Palm is a tree which by now is grown especially in Asia and generally at an industrial scale. Mushrooms, which are as easily grown in urban as in rural settings, are a forest product when collected in the wild, something that modern food tastes encourages, given the taste for organic and "natural" foods.

A shared feature of NTFPs in South Sudan (as in other African countries) is their reported great importance for local communities, for which many are traditionally mainstreamed in livelihoods, food habits or other culturally significant aspects of life. Over time, all NTFPs have become at least partially commercialised, with Gum acacia in particular becoming almost wholly for sale and significant as an export. Local people tend to engage in all stages of NTFP value-chains from production in the forest (or on the farm where the NTFP has become domesticated) through processing at least some of the forest/farm output till marketing. Traders are an important supplement to producer sales efforts and enable NTFPs reach urban and export markets.

The close integration of NTFPs in local livelihoods; their role in supplementing agricultural incomes and so stabilising rural earnings; the accessibility as investment opportunities because they are not capital-intensive are all factors that justify promotion of NTFPs and having a project to support efforts.

The NTFP activities were originally programmed to start in 2018/19, to run for 10 years. Given that when taken all together NTFPs are numerous, no project can succeed if it disperses its attention on supporting development of all of them. Even the leading seven NTFPs mentioned above would be too many to take on simultaneously under the project. Exclusions can be arrived at as follows:

- Gum acacia has been the subject of much attention, with USAID and SNV in cooperation with FAO taking the lead in initiating dialogue about its future. It appears that they are also extending support to revival of this "industry" although all indications are that it faces market challenges¹¹⁵. It may be best to keep support for this commodity with those who have already started;
- Palm Oil is a very important traded commodity globally and supplies are dominated by Indonesia and Malaysia's industrial-scale plantations. Although originally an African plant, the oil palm has been made more productive and convenient to cultivate in its new home and Africa is struggling to be a significant producer although its consumption of the oil is quite high (mostly imported). In South Sudan it is reported that the oil palm also produces a wine¹¹⁶ which

¹¹⁵ Concentration of buyer power in the hands of only 3-4 companies worldwide; abuse of monopoly power by the unified Sudan's Gum Arabic Corporation until motivation of producers had been practically destroyed and Sudan's market dominance was lost; emergence of more active competitor producers (especially Chad and Nigeria) due to Sudanese inefficiencies.

¹¹⁶ There may be confusion as to whether it is the oil palm or another palm variety which produces the wine.

is consumed locally and sold in urban areas. Traditionally, institutional responsibility for growing the oil palm falls under the crops sub-sector and therefore can be excluded from the forestry project;

- Bush meat fits the “organic food” label but its consumption risks triggering the sensitivities of strong environmental lobbies so it may be best at this stage to exclude it. This despite the fact that in Southern Africa (especially Namibia, South Africa, Zimbabwe) it is possible to find “wildlife (not “bush”) meat” even in supermarkets but systems are in place there for traceability of the product and for confirming that harvest is from sustainable sources. Threatened species never feature in the bush meat trade;
- Mushrooms are an attractive fat-free food increasingly popular among the middle classes in developed countries. In Africa, artificially raised mushrooms (therefore not a forest product), are increasingly found in supermarkets. For the mass African market, however, wild mushrooms may be had only seasonally but the trade is disorganised and so mushrooms are not yet a mainstream food. The project should at least study the market, characterise the value-chains, and identify opportunities and challenges to mainstreaming mushroom in the market before development efforts can be justified.
- Given the above review, the project should focus initially on the following NTFPs: shea (prospects for growth are great, if West Africa’s example is considered); bamboo, as an easily cultivated, accessible and lightweight construction material; and honey, an already accepted food with potential but facing a disorganised value-chain [but Livestock Ministry insists this should remain under that sector].

The activities of this project recognise as point of departure the current reality of the NTFP sector: activities are almost all informal; part-time/seasonal; small-scale; non-specialised, with the producers also attempting processing and sometimes also marketing; unorganised (i.e. producers are generally individuals). It is likely that like other small-scale and micro-enterprises, NTFP activities face high morbidity and mortality.

The project cannot claim to be developmental if it simply continues the existing ways of doing business; its role should be to study in a profound manner how the value-chains work; how well they manage resources from the productivity and sustainability viewpoint; where in the value chain money is made or opportunities for doing so are being lost most; what can be changed to make the enterprises more dynamic, profitable and sustainable; and then initiate interventions that can cause the desired dynamism. It is inevitable that part of the project’s work should address policy aspects; in many countries, NTFP enterprises generally operate below the official radar and are ignored or marginalised in policy attention.

One or other of the three selected NTFP value-chains (bamboo, honey, and shea) can be grown or produced in every part of the country. The project should try to be present in contrasting agroecological belts. The start would, of course, have to be selective; it is recommended that among the 12 initial sites (four each for each selected NTFP), initial focus be on two types of situation, with lessons to be learned from each:

- Locations near urban centres or close to main roads that facilitate access to them for markets;
- Locations where the agro-ecology best known for the product is dominant (e.g. the shea belt in the Equatorias and for bamboo).

Within the leading agro-ecologies for shea and bamboo, preference should be given to locating where access to roads is not extremely difficult.

An absolute prerequisite to success is that the law should guarantee the growers’/producers’ right to sell their produce; heavy bureaucratic licensing and control is very bad for small enterprises and would kill the initiative.

Opportunities should be sought to co-locate pilot sites with those for the project “Participatory establishment and management of forest reserves”.

4.4.3 Participatory establishment and management of forest reserves project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Forestry		
(2) Project name:	Participatory establishment and management of forest reserves project		
(3) Project ID:	03.03 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2020/21	Ending FY: 2029/30	Duration (years): 10
(5) Total investment:	SSP 20,790,000	USD 5,198,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:	03	FO.SA7	Community forestry, agroforestry and smallholder forestry and tree growing on private lands	Table 2-3
(2) Government organisation:	07	MAF-FO	Directorate of Forestry	Table 2-6
(3) Activity types:	203	SP-EX	Service delivery and Infrastructure development - extension and training	Table 2-12
	210	SP-SI	Service delivery and Infrastructure development - social infrastructure	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	X
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	X
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	X
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	X
	52	NGL	NGO loans and equity financing	

Items	Information
61	FGI Financed by generated income

Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

According to Table 10.1 in the August 2014 draft CAMP Livelihood Zone Data Book, out of South Sudan's total land area, some 208,157km² (33%) is covered by trees and another 257,236km² (40%) by shrubs. Out of this, forest reserves and wildlife-related forest reserves total an estimated 19,500km², which is just over 9% of the tree-covered land area and only around 3% of the country's overall size.

Subtracting the current gazetted forest reserves and wildlife areas from the total area of tree-covered land would leave over 203,730km² of trees not protected by government. In addition, there are 257,236km² of shrubs largely outside protected areas. This being the case, the greater interest of managing the country's forest and woodland resources is best served by also paying attention to this larger expanse of forests rather than concentrating only on government forest and wildlife reserves. This project is a step in this direction.

It is unlikely that under the Forest Policy currently nearing Parliamentary adoption, South Sudan can establish a large-enough extension capacity to exhort rural communities to manage these woodland and forest resources and to give them technical support to do so. In the absence of such effort and given the "common property" regimes which customary tenure normally is, random loss of this vegetation is likely to occur and it could be very rapid. No doubt conversion to farming and human settlements may account for much of this, but it would help if the process was managed rather than haphazard.

One way of ensuring that such "management" of land-use conversion happens is to first, and as soon as possible, place the non-public forests/woodlands under local-community stewardship. This is perhaps a looser protection but nevertheless a useful barrier which would force all who want to change land use to first go through an assessment and approval process. This project is designed to support such a process of community-level reserve establishment and thereby hopefully to place under some protection a greater share of South Sudan's important woodlands/forests currently outside government reserves.

The actions will be implemented on the basis of a relatively loose reference to community participation in the draft Forest Policy (there is reference to community reserves but no holistic Policy Statement on it). But it is not yet time to press for a specific "Community Forestry Policy" – instead to develop practices which can inform future development of a policy statement on the matter and a set of regulations and incentives for it.

The project is justified by the much larger quantity of biological resources that could be protected; the ambition of the government for 20% of land to remain as forest leaves far too much woodland open to complete uncontrolled loss. Once gone, the livelihood benefits of the vegetation are lost; the widespread protection of soils and water are also lost; and, the overall ecology of the country changes drastically. It is taken for granted that over time, some of the areas protected under community reserves will change land use as the population grows; but the change will be subject to scrutiny and approval rather than remaining uncontrolled.

(2) Objectives:

In matters of Joint Forest Management (JFM):

- To plan and implement JFM activities in selected contrasting forest reserves for learning diverse approaches
- To carry out pilot activities in the selected reserves and draw lessons of experience from them
- To build capacity on joint community-government management of forests through training for a combination of national and state-level staff and local communities

In matters of Community Forest Reserves:

- To improve understanding of community attitudes to forest reservation and promote interest in establishing their own
- To help communities establish reserves in contrasting situations and learn how best to manage them and sustain community commitment
- To build capacity on community management of their own forest reserves

(3) Overall description including temporal and spatial extent of project:

Given the participatory nature of the project and the fact that much of it would preferably be implemented by state governments (whose capacity is particularly weak), it is best to delay start-up till 2020/21; it will then operate for 10 years. It is assumed that by then the Institutional Development activities of CAMP will have progressed in strengthening state capacity enough to allow project launch. Projects on inventory and land use will also have generated the necessary information for prioritising where to act first.

The project will have national coverage in all the states which have some shrub/tree

Items	Information
	<p>vegetation but will have to select examples in each, as a demonstration. Full expansion is assumed to be taken up by government after project completion. Specifically, it is proposed that within its lifespan the project take on perhaps 50 community reserves (equivalent to an average of 5 per state but with woodland/forest states having more than the bare ones). The first batch to pilot, and learn by experience, should, however, be no more than 5 sites in the first five years; expansion needs to draw upon the lessons from these. The eventual ambition should be coverage of all States. Most South Sudan forests and woodlands are outside the 20% government Forestry Policy goal for eventual forest cover and some can therefore be reserved at community level. Additionally, five government reserves will be selected as pilots for joint forest management by government in cooperation with local communities.</p> <p>The selection of communities to cooperate with should be influenced by some of the following considerations:</p> <ul style="list-style-type: none"> • representativeness of a range of agro-ecological /livelihood zones; • the importance of non-reserved woodlands near rural communities for vital ecological functions, such as stream-bank or headwaters protection; • the degree to which forests/woodlands in the selected communities face differing levels of deforestation; • particularly high level of dependence of women or men on the woodlands and respect for the differentiated roles they play in managing the resources; • the richness of the woodlands in stocking of traditionally valuable species such as Gum acacia; and • the importance of woodland cover for locally critical livelihoods (e.g. seasonal or permanent grazing, local charcoaling enterprises etc) <p>Ownership of reserves confers certain obligations but also rights on the communities. Among the rights is ability to decide whether to keep the forests/woodlands fully intact and indigenous, to partly enrich them, or to establish tree plantations on parts of them. Communities may (with advice from government or NGOs regarding land capability) also choose to exclude from reservation (or to excise after reservation) lands of a quality better suited to other uses, such as cultivation or settlement.</p>
(4) Component structure:	<p>Component 1: Community Joint Management of Government Forest Reserves. Component 2: Pilot Community Reserves Establishment and Management. Component 3: Capacity Building for Participatory Management of Forest Reserves.</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Participatory projects interact with communities that differ in culture and other ways. Nevertheless there are fundamentals to respect in all cases, among them is the need for balance in engaging people in their diversity, aspects of which include: gender (men vs. women and the two acting jointly); youth vs. the old; subsistence oriented vs. entrepreneurial people; those who like to work in groups and the individualistic; various strata by income; the lazy and the active; the aggressive and the compliant; those traditionally in power and the led; the politically active and the passive etc. Perfection is not possible in engaging all, but efforts should be made to avoid situations where those who are not consulted seek to undermine the consensus achieved by others.</p> <p>As indicated in section 2.1(3), it is proposed that within its lifespan the project take on perhaps 50 community reserves (equivalent to an average of 5 per state but with woodland/forest states having more than the bare ones). However, the first batch to pilot and learn by experience should be no more than 5 sites in the first five years; expansion needs to draw upon the lessons from these.</p> <p>Component 1: Community Joint Management of Government Forest Reserves Activity 1: Select an initial 5 Central and State Forest reserves in contrasting locations; provide planning support to joint management of these forest reserves including for extension services.</p> <p>Using pre-agreed criteria (with management) select 5 representative Central and State Forest reserves¹¹⁷ study their economic, social and environmental characteristics relevant to management focus. Following full consultation with communities, prepare a costed plan for roll-out of the project including phasing and main outlines of proposed JFM approach.</p> <p>Prepare management plans for the selected Forest Reserves to serve as pilots. The plans, supported by maps and setting out provisional sharing of management responsibilities, should specify which areas (if not whole reserve) are to go under JFM. Finalise only after full consultation with communities.</p> <p>Design a participatory extension strategy and plan for its roll-out, specifying organisational arrangements and capacity needs.</p>
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¹¹⁷ Include among the selected perhaps 2 where purpose of JFM is to capture an economic opportunity not to solve a conflict or other problem.

Items	Information
	<p>Output: Report, including workplan for project roll-out; a series of management plans for selected reserves, with detail on aspects to go under the JFM modality etc. Maps would generally be at 1:10,000 detail level; Extension workplan specifying requirements for its execution.</p> <p>Activity 2: National/State support to organizing communities and building their capacity for joint management of forest and tree resources Study 5 selected communities and for each propose and consult regarding tailor-made or adapted organisational arrangements for JFM, specifying in a gender-responsive manner the responsibilities, codes of conduct, division of benefits, sanctions, fora for dialogue and decision, dispute resolution etc. Assess capacity and gaps for implementing ambitions.</p> <p>Output: Report with design of organisational arrangements and proposals for capacity-strengthening, including workplan for its roll-out</p> <p>Activity 3: Implementation of joint forest management in the initially selected 5 national and state forest reserves Implementation of pilot management activities in the 5 selected forest reserves; build in lesson-learning. Assessment (after at least 5 years) of experiences in piloting and dissemination/training activity for key Forestry Directorate, State and community personnel</p> <p>Output: Pilots projects implemented; Documents communicating lessons learnt from the pilots</p> <p>Component 2: Pilot Community Reserves Establishment and Management</p> <p>Activity 4: Assistance to promote, design, select and negotiate five pilot community forest reserves for establishment and management interventions. Using criteria that could draw upon suggestions under 2.1(2), propose shortlist of 5 locations for community reserves establishment, assist negotiation and final selection of the 50 initial sites. In collaboration with states and communities, design programme for the 50 initial sites and prepare plan for state implementation.</p> <p>Output: Initial report with shortlist; final report and list after negotiation; Programme design and costed workplan</p> <p>Activity 5: Establishment of village organisation (or adoption of already existing organisation to also take on forests) and in a gender-responsive manner carrying out participatory formulation of its "constitution", codes of conduct, rules on division of responsibilities and benefit sharing, dispute management mechanisms etc, identification of funding and other resources for action.</p> <p>Output: Formalised community organisation; consensus reached on modalities and organised for management responsibilities</p> <p>Activity 6: Participatory delineation of community reserves, finalisation of detailed management plan, establishment of reserves followed by execution of field activities¹¹⁸ according to workplan. Work closely with communities to: develop management plans in a participatory manner, taking account of diverse interests (agriculture, subsistence, entrepreneurial, conservation, gender concerns etc); Reserves boundaries set out; and access material support through state forest administrations</p> <p>Output: Reserves delineated; Management plans for each community reserve ready; management activities underway</p> <p>Activity 7: Provide extension and material support in line with management plan and with agreements with communities. Output: Extension and other support services delivered/ accessed</p> <p>Component 3: On the job training, formal training (focus on training of trainers) and other capacity building for management of community forest reserves</p> <p>Activity 8: For both community forest reserves and JFM components, undertake participatory assessment of informal and formal training needs – gender-matched to clients to be served - (including exposure study tours at all appropriate levels) and prepare full training plan. Output: Training workplan</p> <p>Activity 9: Carry out (a) on-the-job training, (b) short courses at Forestry Training Centre at various levels with practicals at nearest community reserve and JFM project sites; for the latter, focus on training of trainers for multiplier effect; (c) study tours (which add a motivational function to the training objective) to recognised</p>

¹¹⁸ In the case of natural forests/woodland, from the very start it would be possible to range from vegetation management and planting to harvest, processing and sales.

Items	Information
	<p>successes for team leader and the managers and community leaders (Tanzania, India); and (d) study tours for community leaders and community trainers to other community reserves/JFM sites within South Sudan.</p> <p>Output: (a) on-the-job training, (b) short courses at Forestry Training Centre; (c) study tours (d) Workshops per site (5 sites) per year; 2 workshops/year for all 5 sites (to exchange experiences)</p> <p>Activity 10: Formal in-service short courses at Forestry Training Centre at various levels possibly combined with study tours. Extension/Mobilisation-oriented short courses in participatory forestry (study tours inclusive): for 15 certificate-level personnel for 3 months; for 10 diploma-level personnel for 6 months; for 15 community leaders and 15 outstanding performers for 1 month</p> <p>Output: more skilled staff/assistants/community leaders or role models</p> <p>Activity 11: Prepare and keep updated management plans for community reserves and JFM forest/tree resources and provide oversight and quality control for plans prepared by private parties.</p> <p>Output: Community reserves and JFM resource management plans</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<ul style="list-style-type: none"> • State-level Forestry Administrations • Support by: Forestry Directorate, Agroforestry and Forestry Extension Department (in cooperation with Afforestation and Natural Forest Conservation Department); Survey and Inventory Departments (for demarcation of boundaries; could be through Project "National forest resources inventory and information management") • Local community organisations
(2) Description of beneficiaries within the framework of the project:	<ul style="list-style-type: none"> • Rural communities would be the prime beneficiaries • State-level Forestry Administrations would be the most direct beneficiaries among government institutions in terms of updated knowledge and capacity • The Forestry Directorate (especially the Agroforestry and Forestry Extension Department) would be the secondary beneficiary. • The Kagelu Forestry Training Centre will have its participatory forestry capacity increased

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<ul style="list-style-type: none"> • Existence of larger number of local community reserves thus expansion of forest protection beyond government Forest Policy ambitions • A diverse range of JFM experiences with options to build on experiences for adaptation to other sites • Initial capacity in place and confidence to transfer lessons to others • Impact: better managed and protected reserves in an atmosphere of trust with neighbouring communities.
(2) EIRR and/or FIRR, and/or other economic analysis:	<ul style="list-style-type: none"> • To be done at detailed formulation of project

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1" style="width: 100%;"> <tr> <td style="width: 15%;">Negative: a</td> <td>Project:</td> </tr> <tr> <td>Positive: c</td> <td>a: is likely to have minimal or little impact on the environment and/or society</td> </tr> <tr> <td></td> <td>b: may have an impact on the environment and/or society</td> </tr> <tr> <td></td> <td>c: is likely to have a significant impact on the environment and/or society</td> </tr> <tr> <td></td> <td>d: will have a significant impact on the environment and/or society</td> </tr> </table>	Negative: a	Project:	Positive: c	a: is likely to have minimal or little impact on the environment and/or society		b: may have an impact on the environment and/or society		c: is likely to have a significant impact on the environment and/or society		d: will have a significant impact on the environment and/or society
Negative: a	Project:										
Positive: c	a: is likely to have minimal or little impact on the environment and/or society										
	b: may have an impact on the environment and/or society										
	c: is likely to have a significant impact on the environment and/or society										
	d: will have a significant impact on the environment and/or society										
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Positive)</p> <ul style="list-style-type: none"> • This project will, if sincerely implemented, empower local communities to share responsibility both for challenges and opportunities. The social gain from build-up of confidence can be great. • In the case of threatened reserves, community engagement could reverse threats. • Environmental improvement (conservation of vegetation for its protective functions) and improved social organisation if well implemented. • Engaging all stakeholders in their diversity should facilitate social cohesion around the project and thereby more effective contribution of all. As stated under 2.2(1), the need is to cover such aspects of diversity as: gender (men vs. women and the two acting jointly); youth vs. the old; subsistence oriented vs. entrepreneurial people; those who like to work in groups and the individualistic; various strata by income; the lazy and the active; the aggressive and the compliant; those traditionally in power and the led; the politically active and the passive etc. 										

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • Number of community forest reserves • State of reserve management before JFM and community reserves start • Level of skills in the communities and in involved government institutions • Level of community organisation for resource management • Nature and level of community material benefits from forest reserve
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Items	Information
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • Management skills among staff and in community • As at the starting point (to allow direct comparison)
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> • Surveys • Checking documentation
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> • Forestry Directorate management, State Forest Administration, and Local Government administration • Missions, including government/development partner periodic progress-review missions

2.7 Required human resources

(1) Principle of human resources management:	<ul style="list-style-type: none"> • Management level oversight over project • Gender sensitive but competency/merit-based selection of counterpart staff (already competent or with good prospects of quick learning) • Assignment of technically competent personnel and juniors able to learn • Efficient and effective engagement of consultants and specialists outside of the government; all external experts to have a trainable counterpart • Sufficient staffing
(2) Required human resources in the public sector (Positions, grades and numbers):	<p>Long-term staff:</p> <ul style="list-style-type: none"> • Full time Senior level officer to lead team with good communication skills and experience with rural communities • 2 Full time Supervisors (diploma-level) one each for reserve activity and JFM activity • Certificate-level extension officer/mobiliser at each site or nearest government office • 1 assistant at each site hired part-time (best performers in community) to assist extension agent
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Paid consultants/short-term teams:</p> <ul style="list-style-type: none"> • Planning officer for 1st year of project • Facilitator for negotiations (could be a local government officer with correct personality) • Technical advisors (short listing of locations; determination of main purposes of management in reserves; identification of needs for further reserves; design of M&E system for lesson-learning) • Part of the time of an M&E officer (2 months in 1st year; 2 weeks each year afterwards) • Trainer consultant for training of trainers courses (2 months/ year)

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	M L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	<ul style="list-style-type: none"> • Implementation of the project itself faces very low risk. • Local community misunderstanding of intentions is possible if publicity mishandled or sold as central or state government directive (fear of loss of control over land)

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	<ul style="list-style-type: none"> • Crucial that all states are fully briefed about plans and intention not to cover all their reserves and clarification of what support they can expect from the project
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<ul style="list-style-type: none"> • As for project period but reduced field teams • One land reservation negotiation officer (senior level) – if additional reserves proposed • One full time trainer for upscaling and to keep teams updated
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4.4.4 Market development and promotion for commercial forest products project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Forestry		
(2) Project name:	Market development and promotion for commercial forest products project		
(3) Project ID:	0 3 0 4 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2015/16	Ending FY: 2019/20	Duration (years): 5
(5) Total investment:	SSP 1,816,000	USD 454,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FO.SA6	Commercial forestry, forest products market	Table 2-3
(2) Government organisation:	07	MAF-FO	Directorate of Forestry	Table 2-6
(3) Activity types:	201	SP-IM	Service delivery and Infrastructure development - information management and analysis	Table 2-12
	303	PS-TR	Private sector - trade	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	X
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

Success in developing and targeting industries to meet what the market wants; success in securing a place in foreign markets or in getting imports from the best sources all depend on quality information. Current South Sudan information on forest products production and trade (both domestic and import/export) is best described as guesstimates, apart from some survey information on fuelwood and charcoal in the CAMP Situation Analysis report plus some localised information on Gum acacia and shea from USAID, SNV and MDFT; in a number of cases, even guesstimates are lacking.

Before the CPA, South Sudan was never segregated from the unified “Sudan” whole in the FAO Yearbook of Forest Products (the global reference database for wood products) and no disaggregated sub-totals or coefficients for estimating South Sudan’s share existed. Since independence, the separate South Sudan data (production, imports, exports) in the FAO Yearbook of Forest Products (YBFP) started in 2011 and so far cover only non-coniferous roundwood and fuelwood production (and consumption); nothing else. The South Sudan trade data are lacking even for commodities such as paper and paperboard that are always traded via formal channels; consequently it is pointless to search through the more multi-sectoral UN COMTRADE database at this stage since it imports data from the FAO - YBFP. The annex to this project profile gives first approximations on the South Sudan consumption baseline using coefficients for all Eastern Africa derived from the FAOSTAT database.

In view of this, this market development project critically needs to prioritise information before it can progress on seeking and securing markets at home and abroad. It also needs data to recommend suitable investments in forest management, in forest plantations and in processing industries to meet future domestic and export markets. To do without this would be to run blindly. Currently, a good example of running blind is the relatively massive attention and panic associated with South Sudan imports of Democratic Republic of Congo (DRC) timber through Uganda. Many authors imply that these imports have calamitous impacts on DRC forests. And yet the volumes being mentioned are only around 4,000 to 5,000 m³ annually – far less than South Sudan’s pressure on its own forests estimated at about 9.9 million m³ consumed annually for fuelwood, charcoal, sawnwood and other wood products (see Annex).

To gain a sense of proportion requires urgent attention to establishing a baseline and then a permanently updated database on production, domestic consumption, imports and exports. But to know how best to develop the South Sudan market, the project should look at more than the market alone – it must also look closely at production. The project will pay attention to both domestic and external markets: fuelwood and charcoal sold domestically can create at least as many (and most likely more) jobs as exports. Domestically consumed products’ markets, no less than exports, need to be developed, made more organised, and be based on more sustainably managed forest raw materials.

For non-timber forest products, the best information available is on gum acacia, due to imports being controlled by only 3 to 4 companies globally which are therefore all easily contacted. Nevertheless, data on the share of South Sudan are only rough estimates, since information used to be combined for all the former Sudan before the CPA; a new baseline of statistics is under formation through USAID and SNV. For Shea butter and other products, there are only anecdotal data; for honey, almost no data; for medicinal products and other largely subsistence products of forests (such as thatch etc), no data.

The project must therefore select cut-off points: (a) it will assess and seek market development only for products (such as wood and one or two non-wood products) that have significantly monetised markets and therefore can quickly contribute to the government’s ambition to make South Sudan a wealth-creating country; (b) it will not look at markets for non-commodity products of the forest, i.e. at services such as forest-based tourism, carbon sequestration, or watershed and riverine ecosystem protection - the “markets” for them will be looked at under their own projects.

The core mission of the project is to develop markets for commercial forest products. The attention to better information precedes it only because its availability is a precondition. As orders of magnitude for consumption, production and current trade are established, a sense of the key drivers of the markets can be gained. The African Development Bank has recently analysed and published price and other key elements of cross-border competitiveness for a range of sectors.¹¹⁹ The project will use its understanding of market drivers to enable it to craft market development strategies. In some cases, to “grow” the

¹¹⁹ See African Development Bank (2013): “South Sudan: a study on competitiveness and cross-border trade with neighbouring countries”. AfDB, Tunis.

Items	Information
	<p>market will require development of production capacity to meet targeted or generalised demand; this will ultimately have a pull effect on management of forests including afforestation/reforestation and enrichment of forest resources. The market development is thus an essential lever for investment promotion and targeting in the sector.</p> <p>Furthermore, both in matters of information and market development, the project must ensure that the institutions responsible are strengthened; capacity building must be a critical element of the project. The project should extend support not only to the Forests Directorate but also to critical cells in the ministries responsible for statistics, trade (domestic, external) and customs administrations – this is probably the only way to ensure that forest products data are well collected and market planning can take place with confidence.</p>
(2) Objectives:	<ul style="list-style-type: none"> • To promote growth of sustained and expanding markets for South Sudan forest products that can be produced competitively and sustainably. • To this end, to quickly establish baseline information on production, domestic consumption and trade (domestic and foreign) for selected wood and non-wood products. Information should also be gathered on prices (to check competitiveness) and trading channels and their effectiveness. Drivers of market change are a critical information need. • To use the information gathered to design and implement market promotional efforts for forest products. • To feed what is learned about the market and from promotional efforts back into the sector so it can influence forest management/planting investments and efforts. • To build capacity for all the above.
(3) Overall description including temporal and spatial extent of project:	<p>The project should preferably start immediately (2015) and is to run for 5 years. It is not a high-cost project but a critical one for other projects.</p> <p>Market information: Most project effort should target areas of market concentration (for domestic markets) and perceived main destinations (for exports) – something that is partly aided by studying commodity traffic at the main border posts. Imports are of interest in terms of overall magnitude, although some knowledge of their origins can also be useful if it influences prospects for import-substitution market development (some imports – e.g. aid-tied supplies - can be “locked-in” and difficult to displace even with domestically produced goods).</p> <p>It is proposed that the project establish the core baseline of domestic production, consumption and trade for selected key products within its first year – for some commodities, within months of start-up. The following is the list of key wood products to look at first (using internationally recognised definitions):</p> <ul style="list-style-type: none"> • Fuelwood • Charcoal • Saw and veneer logs • Poles (treated and non-treated) • Sawn timber (utility vs. decorative) • Wood-based Panels • Paper and Paperboards (even if local production may be long into the future) <p>The list of key non-timber forest products (NTFPs) could include:</p> <ul style="list-style-type: none"> • Gum acacia (much information already with USAID, SNV) • Shea • Honey [Ministry of Agriculture website lists a \$2 million honey bee products private investment among its 16 priority opportunities] • Bamboo <p>Trends; stability; instability/unpredictability; seasonality or other periodicity of markets must all be captured in the preparatory studies. For all products, an attempt should also be made to have an “outlook” section to the analysis, i.e. to professionally “speculate” about future trends for the market and their driving forces.</p> <p>In addition to knowing the quantities (production, consumption, trade), it will be necessary to understand the value chains, their structure, the prices and their behaviour, and the key players and stakeholders. In characterising the value-chains, it will become apparent that men and women play different roles and their relative importance can vary along the value chain. Segregation of genders is therefore most valuable in such analysis. The linkages between the market and the producers and whether some producers hold inordinate market power will be important in the relatively small market expected in the country.</p> <p>Assessments for the most economically important products (fuelwood, charcoal) can already build upon the CAMP preparatory surveys. A general feel exists regarding the relative importance of main sources of supply and characteristics of producers; of rural vs.</p>

Items	Information
	<p>urban consumption and so representative urban centres (e.g. Juba, Malakal, Wau and the next two largest) could be targeted, with a few small settlements added in to understand the drivers of consumption for them too.</p> <p>Key demand sectors for wood can also be targeted for study (e.g. construction, brick-making, etc) as can the main channels of distribution. For external trade, apart from getting a balanced cross-section of the traders (small to large; formal and informal) and borders, any significant flows should also be cross-checked with data of trading partner countries. Price information should be part of the scope of study.</p> <p>Market Development and Promotion: The “market development” core of the project objective can start in earnest in 2016/17; its strategy would be based on understanding derived from the prior studies of existing markets; main commodity sources and their significance/sustainability; current and historical direction of trade flows; and apparent drivers of demand, supply and direction of trade. “Development” and “promotion” will require attention to information dissemination; participation in promotional events such as fairs; streamlining of bureaucratic processes in the distribution chains and border posts; in a few cases negotiation with other countries. But the effort must be justified by expected returns: some products will be traded in too small volumes to justify special effort so focus should be on what is worth attention.</p>
(4) Component structure:	<p>Component 1: Market assessment and outlook for key forest products for (a) Export-focused products, and (b) Domestic market focused products</p> <p>Component 2: Support to market development (link Ministry of Trade): trade negotiations, trade fairs, publicity etc. and market pilot project implementation</p> <p>Component 3: Support to institutional development of wood products trade (in cooperation with Chamber of Commerce, Industry and Agriculture and Ministry of Trade).</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>As suggested in section 2.1(2), the project should start with market studies operations in the three principal cities (Juba, Malakal and Wau) and at three key border posts (to Uganda, to Sudan, to Ethiopia). Market development/promotional efforts will be targeted according to the findings of the market study. Work should preferably be in cooperation with the ministry responsible for trade and with Chamber of Commerce, Industry and Agriculture:</p> <p>Component 1: Market assessment and outlook for key forest products for (a) Export-focused products, and (b) Domestic market focused products</p> <p>Activity 1: Establish baseline data on production, consumption and trade (domestic, foreign) for selected products (see Section 2.1(2)) and analyse the value chains, their structure, the prices and their behaviour, and the key players and stakeholders (including by gender) – determining whether some producers hold inordinate market power.</p> <p>Output: Baseline Report on value chains - focus on industrial forest products but update also fuelwood and charcoal¹²⁰</p> <p>Activity 2: Analyse market data so as to identify the most dynamic products which also show promise for long-term growth. Include an “outlook” on market growth based on an understanding of what drives their dynamism and long-term prospects.</p> <p>Activity 3: With particular attention to the dynamic products identified at Activity 2, prioritise location in the value chain and themes of intervention;</p> <p>Output for activity 2 and 3: Report with shortlist of dynamic products with long-term potential and drivers of market prospects and prioritised location of project intervention in market analysis and development.</p> <p>Component 2: Support to market development (link with Ministry of Trade): trade negotiations, trade fairs, publicity etc. and market pilot project implementation</p> <p>Activity 4: Review multisectoral trade and market promotional efforts of government and private sector and identify how best (if at all) forest products can be associated with them. Prioritise products to focus on in market development.</p> <p>Output: Report with recommendations for policy decisions</p> <p>Activity 5: Draw up a proposed strategy with clear priorities and required resource levels for promotional activities in areas of growth opportunity, both domestic (e.g. fuelwood and charcoal from sustainable sources) and external (e.g. teak sawnwood and possible veneer/plywood).</p> <p>Output: Report with recommendations for policy decisions, including on advisory/extension services to marketing and trade.</p> <p>Activity 6: Secure full engagement of the private sector (including organisations of small/medium enterprises) in launching and sustaining the market</p>

¹²⁰ In the absence of actual survey data, fuelwood and charcoal are more easily estimated from unit consumption coefficients because their consumption is more “needs-driven” than, say, for sawnwood and panel products.

Items	Information
	<p>development/promotion efforts. Output: Promotional activity and materials/events</p> <p>Component 3: Support to institutional development of wood products trade (in cooperation with Chamber of Commerce, Industry and Agriculture and Ministry of Trade). Activity 7: With full gender-sensitivity but subject to merit judgements, identify critical capacity and organisational improvements in (a) the area of data and information, including establishing and maintaining databases, and (b) the value chain to allow market growth, stability and establishment of a reputation for reliability and quality. Output: Report with recommendations Activity 8: Implement capacity-building activities including for people of both genders from the private sector, provided they are sponsored by industry associations/Chambers rather than individual firms – it should in general not be necessary to establish/construct new facilities for this. But equipment would be necessary (especially for collection and analysis of information and production of publicity materials, newsletters etc.) Output: Promotional activities underway</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<ul style="list-style-type: none"> The Forestry Directorate's Forest Industry and Forest Economics and Programme Departments will be the key service providers, working jointly. In the data work, the government's core Statistical Institution should backstop the work. The Chamber of Commerce, Industry and Agriculture and the Ministry of Trade should be closely associated as the teams interact with other parties, such as the Customs authorities.
(2) Description of beneficiaries within the framework of the project:	<ul style="list-style-type: none"> Beneficiaries of the project will especially be Government (especially the Ministry of Agriculture's Forestry Directorate but also the Ministry of Trade) who will gain primarily from capacity-building. It is important to also assist appropriate units responsible for forest products in the Chamber of Commerce, Industry and Agriculture and the Customs Administration.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<ul style="list-style-type: none"> Reliable information base Impact on quality of planning and market promotion efforts
(2) EIRR and/or FIRR, and/or other economic analysis:	<ul style="list-style-type: none"> Not needed

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td> Negative: a Positive: c </td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: a Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: a Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> Impact on environment is very remote. Some measures may be needed to avoid the adverse impact of rapid commercialisation of some products on subsistence users. <p>(Positive)</p> <ul style="list-style-type: none"> A market that is made dynamic can improve socio-economic conditions greatly. 		

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> Data availability Trade levels (quantities sold in domestic and external markets) Time it takes to deliver good to markets (a measure of system bottlenecks) Numbers of competitors in the market Stability (quantities) of the market
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> Same as at the start, to allow comparison
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> Baseline study; missions and consultant surveys.
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> Directorate of Forestry's internal M&E; donor/Government periodic review missions including at end of Phase I

2.7 Required human resources

(1) Principle of human resources management:	<p>Management level oversight over project; in addition:</p> <ul style="list-style-type: none"> Apply gender-sensitive but competency/merit-based selection of counterpart staff (already competent or with good prospects of quick learning) Assignment of technically competent personnel and juniors able to learn Efficient and effective engagement of consultants and specialists outside of the government: all external experts to have a trainable counterpart Sufficient staffing for field assessments and other tasks
(2) Required human resources in	<p>Long-term staff:</p>

Items	Information
the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> • Senior staff member as project manager • Market and trade analyst • Market development/promotional expert (posted to Chamber of Commerce, Industry and Agriculture), • No dedicated administrative support team: project small
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Paid consultants/short-term teams: focused short-term external experts may be needed for data/information design and design of market development/promotion strategy</p> <ul style="list-style-type: none"> • Teams of consultants (see indicative numbers under 2.3(2)) and enumerators • Trainers/motivators (see indicative numbers under 2.3(2)) • Contract event organisers for promotional events/fairs and promotion in general <p>Volunteers:</p> <ul style="list-style-type: none"> • Teak processing firms (preferably their association if it exists) • Value-chain players associations for selected priority products (e.g. if confirmed: fuelwood/charcoal ; gum acacia; honey; sawnwood/timber) • Cooperation (a desk officer?) at Chamber of Commerce, Industry and Agriculture

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	M L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	<ul style="list-style-type: none"> • Misleading information because of suspected poor transparency in sector, particularly for imports but possibly also for teak exports. • Informality and small scale of significant parts of the domestic market will increase data work and impede ease of reaching players with promotional activities

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	<ul style="list-style-type: none"> • Avoiding the temptation to cover too many commodities will be a challenge: need to focus on the most dynamic/promising products. • Some challenges relevant to the project could include dispersal of the domestic market, with consequent temptation to focus too much just on easily-accessible cities. • For foreign trade, literature suggests poor transparency in the import trade (especially for material coming from clandestine harvests say in DRC); the relatively small volumes make cost-effectiveness difficult. Other considerations could include: <ul style="list-style-type: none"> a) For exports, the teak is produced and so can be tracked relatively easily in-country: beyond borders, middle men may be many, starting in Uganda and to the port even before shipment. Temptation to poor transparency may call for periodic cross-checks with main importer countries (India, China). <p>It is critical to listen to the numbers and to the analysis of opportunities: historical ties, such as to gum acacia, should not lock the country in to continued heavy effort if analysis shows that market dynamism is gone and better opportunities exist for other products.</p> • The private sector must be given lead roles in the promotional efforts: the Chamber of Commerce, Industry and Agriculture could be a key partner.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<ul style="list-style-type: none"> • Information-dissemination products: newsletters, papers, publications etc • Government staff levels at 2.8 (2) can be reduced at project end with focus on data/information updating • Private sector (especially Chamber of Commerce, Industry and Agriculture) can take over promotional work
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4.4.5 Multipurpose Management of Forest Reserves project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Forestry		
(2) Project name:	Multipurpose management of Forest Reserves project		
(3) Project ID:	0305	01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development	
(4) Start and ending fiscal year:	Starting FY: 2016/17	Ending FY: 2030/31	Duration (years): 15
(5) Total investment:	SSP 30,005,000	USD 7,501,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FO-SA5	Management and conservation of public forests	Table 2-3
(2) Government organisation:	07	MAF-FO	Directorate of Forestry	Table 2-6
	07	MAF-FO	State-level equivalent organisations	Table 2-6
(3) Activity types:	208	SP-PO	Parastatal organisations and public forests and parks	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	X
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
93	EE	Eastern Equatoria State	X	
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	X
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	X
(6) Livelihood Zone: ¹²¹	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	X
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income		

¹²¹ Eventual ambition is coverage of all National and Selected State Forest Reserves. Start by covering contrasting situations in livelihood/agro-ecological terms such as in terms of encroachment pressure: least; medium; highest pressure.

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:	<p>Forests are not managed for their own sake but mostly for socio-economic benefit, while also ensuring environmental sustainability of the resource base. Management of forests and woodlands justifies project attention because these ecosystems play fundamentally important roles in ensuring habitability of the earth.</p> <p>Forests and woodlands contribute to the atmospheric cycle of carbon and oxygen circulation; to the water cycle; to protecting the land from erosion and the sea, lakes, rivers from excessive siltation; and to conserving the unique biological diversity of plants and animals. They directly produce food (fruit etc.), feed (livestock and wildlife grazing), and fibre (including tree cellulose for construction materials and paper or board products). In many rural areas, forests are the only source of roofing materials or (in places) wall-construction material for humans and livestock shelter as well as storage for agricultural grains. Africa's extensive woodlands also offer home to wildlife, the backbone of Africa's often lucrative nature tourism.</p> <p>Furthermore, in Africa more than anywhere else, forests provide most of the energy for households, for curing or drying foods and key crops (tea, tobacco, fish, etc.), for curing bricks. In these and many other roles, forests and woodlands are an essential life-support resource which has functions that span economic, environmental and social spheres of life. None of the above goods and services can be delivered sustainably without management; forests are a gift of nature but their sustenance cannot be left to chance.</p> <p>Justification for Focus on Reserves: In South Sudan the combination of forest reserves, protected areas, national parks and game reserves together covers only an estimated 19,500km², which is just over 9% of the tree-covered land area which amounts to only around 3% of the whole land area of the country. This leaves at least 203,730km² of trees not formally protected by government, in addition to which there exist around 257,236km² of shrubs largely outside protected areas.</p> <p>Under these circumstances, to launch a project focusing largely on protected areas is justifiable on several grounds (a) much land not under reserves is in fact a land bank for human settlement as population grows and land for cultivation and grazing expands; (b) it is impractical and unaffordable to allocate adequate resources for managing all forest and/or woodland; and (c) reserves have the specific roles of holding in trust for society representative ecosystems, ensuring a minimum vegetation cover for critical economic, social and environmental services, and to demonstrate to society that natural biological resource management is possible and desirable.</p> <p>The above elements more than justify the proposed project. It is best to appreciate that CAMP includes a set of synergistic and/or mutually-supportive projects on forest management, all of which it is desirable to fund and implement.</p>
(2) Objectives:	<ul style="list-style-type: none"> • To update knowledge of state of reserves including encroachment and/or damage to them • To provide the basis for informed decisions on management of forest reserves on the broad national scale • To prioritise main management objectives of the various national forest reserves • To identify gaps in coverage of national reserves which may call for creation of more or extension of existing ones so that all livelihood are represented • To demonstrate through pilots how to carry out effective management in the areas of watersheds and/or riverine forests and of harvest concessions • To assist willing states in the above.
(3) Overall description including temporal and spatial extent of project:	<p>In order to start making revenue as early as possible, the "Concessions" component of this project on Forest Reserves could start in 2016/17 and run for 9 years; the overall forest reserves management component could start in 2018/19 for 10 years; the management of watershed and/or riverine forests component could start in 2019/20 for 12 years (till 2030/31). Thereafter, all aspects of the project would be taken over by the national government. Project start has to await early information to be developed under the project "<u>National forest resources inventory and information management</u>" which would have commenced earlier.</p> <p>Natural Forest Concession Realities Classical forest management always assumed that when a natural forest managed for timber (directly or through concessions) is harvested the first time, only the largest trees of preferred species are taken out. The forest is then allowed to stay idle to allow the remaining trees to grow before the next harvest occurs; the interval could be as long as 30 to 60 years or more but the "harvest cycle" could keep repeating in perpetuity.</p>

Items	Information
	<p>In situations of rapid turnover of governments, to expect such a system to be fully respected may be unrealistic, even in forest reserves. Furthermore, experience is that over time, consumer insistence on a few “preferred, high-value species” is declining; technology therefore now allows harvest of many more species and smaller diameters. This means three things, which the South Sudan programme should assume: (a) more of the preferred species can be harvested at any one cycle; (b) more species can be cut; and (c) to accelerate harvest cycle to an administratively and politically more realistic calendar, enrichment planting of the concession areas in natural forests with faster-growing (indigenous and exotic) species should be encouraged.</p> <p>These modifications should not, however, override ambitions for biodiversity conservation at the level of the broader landscape of reserves.</p> <p>Inter-Project Linkages: This project can be considered an umbrella for all management of protected forests, under which four more narrowly-focused projects were originally conceived that involved both natural and planted forests. To reduce multiplicity of projects (they can be a drain on limited supervisory and/or managerial-grade human capacity), the Technical Committee agreed to explore consolidation of projects. One combination that works is to create this “Multipurpose Management of Forest Reserves” umbrella project under which the following three themes are covered as components: General forest reserves management (principally for conservation); Management of critical national watersheds and riverine forests; and Forest concessions development in forest reserves.</p> <p>Project Coverage: The project would ideally cover all Central Forest Reserves in the country plus selected state reserves. However, it is never a function of development-partner supported projects to cover the entire workload in a sector; it is more important to assist with developing a vision and statement of ambitions for all reserves; to identify additional non-reserved areas which should preferably be placed under government protection; to develop quality plans for all reserves; to assist with prioritisation of interventions; and to actually implement management actions for a representative or most-important sub-set of them. In this case, it is proposed that the project start with perhaps 10 reserves, the selection of which should be influenced by two considerations: (a) representativeness of a range of livelihood zones, and (b) the degree to which the selected reserves face differing levels of encroachment pressure (low, medium, high).</p> <p>Given the background of conflicts, during which a significant number of forest reserve boundaries may have been breached, re-establishing all those boundaries would be a legitimate activity for the project to address.</p>
(4) Component structure:	<p>Component 1: Management planning for national and state forest reserves.</p> <p>Component 2: Pilot projects implementation on natural forest management and conservation for generic management of forest reserves with focus on nature conservation.</p> <p>Component 3: Pilot projects implementation on natural forest management of key watersheds and riverine forests.</p> <p>Component 4: Pilot projects implementation on natural forest management through concessions in reserves.</p> <p>Component 5: Phase I and II – on the job training and other capacity building for management of public forests.</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Management planning for national and state forest reserves.</p> <p>Activity 1: Rapid reconnaissance survey to confirm that all the gazetted national forest reserves still exist or the degree to which their boundaries have been breached (the CAMP situation analysis report and the annex to the forest policy have many queries)</p> <p>Output: Report, which should amount to an overall Forest Reserves Management Plan (FRMP) with an overview of sensible intentions for and sustainable management, including conservation and rational utilization of the forest. Confirmed list of remaining reserves and their completeness with notes on encroachment and/or damage, if any; and indicative breakdown into reserves for ; a) afforestation and re-afforestation, b) watershed and/or catchment areas and biodiversity, c) protected areas including the parks</p> <p>Activity 2: Broad assessments of condition of the forests, including rough approximation¹²² of (a) areas within them which have commercial harvest potential under concession arrangements; (b) areas with potential for plantations</p>
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¹²² The Inventory Project will have prepared broad management plans. This project like all others involved in actual field operations, must prepare management plans in full detail.

Items	Information
	<p>development; (c) areas of high biodiversity and/or scenic and/or wildlife habitat value, (d) protection values especially riverine (to be done in co-operation with Inventory Project); (e) broad assessment of adequacy of access roads to the reserves and forest tracks within them</p> <p>Output: report(s) with maps giving an approximation of land areas in reserves that may be managed for different purposes. The report will indicate broad management zonation to maximize the value and the beauty of the land but within any one forest also there is to be zoning for best match between forest type or condition and its best use</p> <p>Activity 3: Review (in co-operation with Inventory Project) of representative ecosystems which are not adequately reflected in the existing reserves, then negotiating new reserves or boundary extension of existing ones.</p> <p>Based on information from the Inventory project, plan and execute doubling the forest reserve area (which is now 24,500km²) by 15 years from start of the project</p> <p>Output: Report(s) and workplan for additional reservation activity; New reserves and expanded existing reserves; Reports of private sector survey teams, with hard copy maps and satellite pictures and GPS based records of boundaries; Annual progress reports to Ministry on reservation programme.</p> <p>Activity 4: Management plans for 10 selected National Forest Reserves to serve as pilots. Selection to reflect ecological contrasts and contrasts in encroachment pressure: low, medium, high. Assistance to willing states to develop their own management plans.</p> <p>Output: a series of management plans for selected reserves, with detail to suit intended main purpose e.g. awarding of concessions, or start on plantation activity etc. Maps would generally be at 1:10,000 detail level</p> <p>Activity 5: Quality control and/or regulatory enforcement of private sector concessionaires and/or community management activities in government reserves</p> <p>Develop guidelines for each main type of non-government forest;</p> <p>Train enough trainers for on the job to transfer skills quickly enough (i.e. 5 for JFM and other community reserves; 2 for the commercial private plantations; 4 for natural forest concessions)</p> <p>Provide technical support to preparation of management plans by non-state forest management entities</p> <p>Develop, disseminate and provide training in use of guidelines 123 for management plan preparation for private industrial and smallholder forests, including concessions, plantations, and community forest reserves.</p> <p>Prepare workplan and protocols for management plan preparation assistance and quality control of non-state forest management plans [ensure separation of functions between oversight and assistance roles</p> <p>Provide quality control services to non-state forest management entities</p> <p>Acquire adequate equipment and facilities to provide the support functions</p> <p>Output: Reports and follow-up enforcement on management plans of concession-holders and communities and GPS based records of boundaries where possible</p> <p>Component 2: Pilot projects implementation on natural forest management and conservation for generic management of forest reserves - focus on nature conservation.</p> <p>Activity 5: Design and implementation of pilot management activities in the 10 selected forests and assistance to willing states in planning their own pilots</p> <p>Output: Pilot projects planned and implemented.</p> <p>Activity 6: Assessment (after at least 5 years) of experiences in piloting and dissemination and/or training activity for key Forestry Directorate and State staff</p> <p>Output: Documents communicating learning from the pilots</p> <p>Component 3: Pilot projects implementation on natural forest management of key watersheds and riverine forests.</p> <p>Activity 7: Updated inventory and legal status of forest cover in 4 key watersheds and riverine areas and prioritisation of interventions.</p> <p>Satellite and aerial photo cover [from Inventory Project] assessment of watersheds and riverine areas to determine and/or confirm (a) areas of priority for watershed and/or riverine protection; (b) areas which deserve reservation but are not yet under protection and maps at scale 1:20,000 or at most 1:10,000;</p> <p>Nationwide assessment of condition of watershed and riverine forests and indications of efficacy for main function;</p> <p>Specific sample-based inventory of representative traditional uses of watershed and riverine lands by local communities for agriculture and other purposes and</p>

¹²³ Avoid complex/onerous management plans for smallholders.

Items	Information
	<p>attitude assessment of openness to new or adjusted practices; and Consolidated draft costed plan for management of key watershed and riverine forests and proposed action plan for the future (including any expansions and/or adjustments to the existing forests)</p> <p>Output: Report with inventory results, prioritised interventions and workplan; purchase of maps from Inventory project</p> <p>Activity 8: Extension or adjustment of reserve status on key watershed and riverine forests</p> <p>Output: Report with recommended adjustment and/or extension of reserves to be steered through approval process</p> <p>Activity 9: Progressive improved management of key national and state watershed and riverine forests (starting with pilots).</p> <p>Selection of priority national reserves for pilot management activities, rehabilitation where necessary and start on routine management using available best practice</p> <p>Start on management of newly-negotiated national reserves or reserve extensions</p> <p>Extension support to reserves not included under the pilots programme</p> <p>Output: well-managed reserves documented in reports on progress; extension of reserves area or new reserves.</p> <p>Activity 10: Policy, legal and institutional reforms and capacity-building for watershed forestry.</p> <p>Review of adequacy of attention to watershed and riverine forests in national policies for forestry, agriculture and other land-based development and promotion of positive adjustment;</p> <p>Development and implementation of proper institutional arrangements for clearance of any projects in critical watersheds (clearinghouse mechanism, multi-sectoral board)</p> <p>Assessment of manpower and institutional capacity deficiencies and implementation of both on-the-job and formal training. Training should benefit staff from all key land-using sectors likely to engage in upland and riverine developments (e.g. agriculture, irrigation, hydropower, tourism etc.)</p> <p>Output: recommended changes steered through government approval mechanisms till adoption; new procedures and structures; more trained staff</p> <p>Component 4: Pilot projects implementation on natural forest management through concessions in reserves.</p> <p>Activity 11: Preliminary feasibility assessment, planning and prioritization of timber-harvest concessions opportunities for private investors in forest reserves¹²⁴.</p> <p>Doing prefeasibility studies, planning and for prioritised schedules of concession award in (a) natural forests, and (b) forest plantations.</p> <p>Preparation of standard concession agreements (see Box)</p> <p>Setting out concession boundaries, confirmation of inventory, marking of trees to cut if by selective harvest etc.</p> <p>Progressive tendering of concessions, evaluation of bids, award</p> <p>Output: Prioritised plan of operations for concessions award; Standard concession agreement; detailed pre-launch inventory of concession areas; Concessions in place. Illustrative elements in a Concession Agreement - for example including requirement that concession-holder:</p> <p>Accepts the time-frame of the concession</p> <p>Prepare sound workplans for government to approve in advance of commencing harvest operations;</p> <p>Takes responsibility for certain access roads and for obliteration of damage;</p> <p>Agree on how to report and have inspected the volumes which it claims to have taken out - under-declaration in quantity or quality (size, species) is a frequent problem;</p> <p>Ensures that for each tree cut it does not collect for use only the fist (bottom) log or in any case leave behind logs which government may believe to be large enough to be worth processing;</p> <p>Ensures compliance with all other conditions of their lease (which could include need to process a share of logs locally, maintenance of fire-breaks, replanting or planting compensatory trees elsewhere);</p> <p>Has certain obligations to protect against forest fires</p> <p>Any social obligations to the local community etc.</p> <p>Activity 12: Forest reserve concessions management and regulation (with pilots or government demonstrations as incubation exercise where needed) in 5 forest reserves.</p>

¹²⁴ An ideal arrangement would be to also build plantation establishment into partial conversion or replanting of concessions in natural forests where environmental considerations permit. In awarding concessions, preference could go to firms that commit to add value to logs, e.g. by establishment of milling facilities.

Items	Information
	<p>Implementation of government obligations under agreements (e.g. if government agrees to put in critical access roads)</p> <p>Oversight activities</p> <p>Implementation of project pilots in selected prioritised reserves</p> <p>Output: Implementation activities underway; regular and special reports on compliance; fulfilled government activities.</p> <p>Activity 13: Government or Public-Private Partnership (PPP) replanting and/or enrichment planting in concession areas. (Conditional – if enforcement of private replanting proves problematic): decision to carry this out should be made after 3 years and of project inception)</p> <p>Output: Examples of operational PPP activities</p> <p>Component 5: Phase I and II – on the job training and other capacity building for management of public forests.</p> <p>Activity 14: Equipping of entire project.</p> <p>Output: Equipped for capacity-building activities, including in the field.</p> <p>Activity 15: Capacity-building for concessions management. (Assessment of skill gaps and proposal of necessary on the job and other training requirements for government and for concessionaires and On-the-job training and short courses at Forestry Training Centre at various levels.</p> <p>Output: Training plan; more skilled staff or assistants</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<ul style="list-style-type: none"> Afforestation and Natural Forest Conservation Survey and Inventory Departments (staff of the latter should preferably also be associated with the Forest Inventory project)
(2) Description of beneficiaries within the framework of the project:	<ul style="list-style-type: none"> General: (a) The Forestry Directorate (especially the Afforestation and Natural Forest Conservation Department) would be the most direct beneficiary in terms of updated knowledge of the assets it is managing and capacity to manage them; (b) Willing states would also benefit similarly at their level For Watershed and Riverine Aspect: (a) Hydropower and irrigation-infrastructure facilities would be direct beneficiaries from reduced silt load and therefore longer productive life of investments; (b) Tourism enterprises dependent on a green riverside; and (c) In the dry areas, watershed management would benefit directly downstream water users (households, irrigation and water-supply institutions) For Concession areas: (a) The private sector concession awardees would get business opportunities; (b) Forestry Directorate as recipient of revenue; and (c) Local communities would benefit from jobs.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<ul style="list-style-type: none"> Prioritised broad plans for all national forest reserves and proposed priorities for the management of each; proposals for possible expansion (or excision) of forest reserves; detailed plans for selected reserves with sound management actually demonstrated. Impact: better managed and protected reserves.
(2) EIRR and/or FIRR, and/or other economic analysis:	<ul style="list-style-type: none"> To be done at detailed formulation of project

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td> <p>Negative: a</p> <p>Positive: c</p> </td> <td> <p>Project:</p> <p>a: is likely to have minimal or little impact on the environment and/or society</p> <p>b: may have an impact on the environment and/or society</p> <p>c: is likely to have a significant impact on the environment and/or society</p> <p>d: will have a significant impact on the environment and/or society</p> </td> </tr> </table>	<p>Negative: a</p> <p>Positive: c</p>	<p>Project:</p> <p>a: is likely to have minimal or little impact on the environment and/or society</p> <p>b: may have an impact on the environment and/or society</p> <p>c: is likely to have a significant impact on the environment and/or society</p> <p>d: will have a significant impact on the environment and/or society</p>
<p>Negative: a</p> <p>Positive: c</p>	<p>Project:</p> <p>a: is likely to have minimal or little impact on the environment and/or society</p> <p>b: may have an impact on the environment and/or society</p> <p>c: is likely to have a significant impact on the environment and/or society</p> <p>d: will have a significant impact on the environment and/or society</p>		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Positive)</p> <ul style="list-style-type: none"> This project will, by providing plans for sound decisions on natural vegetation management in forest reserves (including at times recommending further forest reserves), potentially enhance the government's capacity to protect, conserve, and utilise forest resources in a scientific manner to minimise, manage, and control adverse environmental and social impacts. Therefore, if well used, the products of the project can have significant and positive impact on the environment and society. By providing the protection of well-managed natural vegetation upstream of watersheds (including at times recommending further watershed and riverine forest reserves), the project will potentially enhance government's capacity to protect, conserve, and extend lifespan of critical infrastructure investments. There are unintended but important environmental benefits in terms of biodiversity conservation. Positive social impact in terms of jobs (income) and new skills from harvest concessions. 		

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and	<p>General:</p>
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Items	Information
situation at a starting point:	<ul style="list-style-type: none"> • (a) Number and areas of forest reserves in improved state, List of National Reserves and whether encroached or otherwise damaged; (b) Information on broad breakdown of potential suitability for purposes such as harvest concessions or plantations etc.; (c) Management plans with maps for all reserves; (d) Management plans inspected and up to date for concessions and for JFM and other community reserves served; and (e) Staff numbers by level of training. <p>In Matters of Watersheds and Riverine:</p> <ul style="list-style-type: none"> • Improved policies, laws and procedures and/or institutional arrangements for watershed management <p>In matters of Concessions:</p> <ul style="list-style-type: none"> • (a) Number and areas of forest concessions awarded and working well; and (b) Revenue from forest concessions.
(2) Measurable indicators and situation at the end point:	<p>As at the starting point (to allow direct comparison), plus:</p> <ul style="list-style-type: none"> • For maps, also detailed ones for those to be managed by project • For management plans, also detailed operational ones for pilot reserves
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> • Surveys • Checking documentation
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> • Forestry Directorate management • Missions, including government and/or development partner periodic progress-review missions

2.7 Required human resources

(1) Principle of human resources management:	<p>Management level oversight over project; in addition:</p> <ul style="list-style-type: none"> • Competency and/or merit-based selection of counterpart staff (already competent or with good prospects of quick learning) • Assignment of technically competent personnel and juniors able to learn • Efficient and effective engagement of consultants and specialists outside of the government: all external experts to have a trainable counterpart • Sufficient staffing
(2) Required human resources in the public sector (Positions, grades and numbers):	<p>Long-term staff:</p> <ul style="list-style-type: none"> • General Forest Management: (a) Full time Senior level officer to lead whole project; (b) Lead operations officer; (c) Lead field assessments officer and 2 assistants; (d) Field teams of 5 each: 1 supervisor and 4 workers (initially 6 for quick coverage of all reserves) then 3; and (e) Mapping and reports officer • For Watersheds and Riverine: (a) Full time officer to lead component; and (b) Field teams of 5 each: 1 supervisor and 4 workers (initially 2 for quick coverage of all reserves) then 1 • For Concessions: (a) Full time officer to lead component; (b) Field oversight operations manager (middle-level); (c) Head of concession planning; (d) 3 Field inspectors to verify compliance with guidelines; and (e) Field teams of 3 each (1 supervisor; 2 assistants) for boundary work, merchantable tree stocktaking and tree-marking (initially 3, later 1)
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Paid Consultants/short-term teams:</p> <ul style="list-style-type: none"> • General Forest Management: (a) Technical advisors (4 months total, 1 international; determination of main purposes of management in reserves identification of needs for further reserves); and (b) Capacity building expert and/or trainer (6 months total, 2 international) • Watershed and Riverine Forest Management: Advisor on watershed multipurpose management (3 months, international) • Concessions: (a) Advisor to draft standard concession agreements and to propose oversight routines (3 months, international); and (b) Capacity building experts: Identification of needs for training (1 month international); Trainers (2 months international; 12 months local).

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	<table border="1"> <tr> <td style="text-align: center;">M</td> <td style="text-align: center;">L: Low</td> <td style="text-align: center;">M: Medium</td> <td style="text-align: center;">H: High</td> <td>(select an indicator from the list)</td> </tr> </table>	M	L: Low	M: Medium	H: High	(select an indicator from the list)
M	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	<ul style="list-style-type: none"> • Implementation of the project itself faces very low risk. • Local community misunderstanding of intentions when boundaries are checked for confirmation • Initially, implementation of the project itself faces significant risks because many bidders for concessions will be small, unfamiliar with forest operations. This will pass quickly if capacity-building done properly. 					

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	<p>General:</p> <ul style="list-style-type: none"> • Crucial that all states are fully briefed about plans and intention not to cover all their reserves and clarification of what support they can expect from the project. <p>In matters of watershed forests:</p> <ul style="list-style-type: none"> • Crucial that all states and affected sectors are fully briefed about plans to expand watershed and riverine protection. • There is much and fairly recent global best practice on convincingly “selling” to policy-makers and the general public the need for upstream conservation: (a) in the field of
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Items	Information
	<p>water, South Africa could be a good source but its stringency would need toning down; (b) in matters of downstream payment for watershed services, many countries now have this, including Japan and South Africa; and (c) in conservation of steep lands at reasonable cost, China has experience from its western mountains.</p> <p>In matters of concessions:</p> <ul style="list-style-type: none"> • Historically, concessions were a hotbed of “cowboy” behaviour by companies, with limited respect for environment. In recent years, there are many codes of practice for field operations, for social responsibility, and for transparency of operations. • Ghana could offer useful lessons on natural-forest concessions and for interface with traditional chieftainships with some powers over their resources. <p>Management plans:</p> <ul style="list-style-type: none"> • Management plans are reference documents and may carry legal weight, security features must be designed in while allowing easy access. This calls for digital access but with read-only features and right to amend being left to only the authorised. • No management plans should be set in concrete but there must be clear protocols regarding circumstances under which amendments can be made and who authorises. • Many forest resources are in the neighbourhood of communities, with whom discussions about management plans will have to be held. Their lack of access to digital information should be recognised and hard-copy options should be available for all information including especially maps.
<p>2.10 Routine operation and required resources after the completion of the project</p> <p>(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.</p>	<ul style="list-style-type: none"> • As for project period but reduced field teams • One land reservation negotiation officer (senior level) – if additional reserves proposed <p>For Management Plans, government will need for routine operation a unit of about 7 people to guide each survey teams:</p> <ul style="list-style-type: none"> • Department head (a senior-level officer) • Two graduate and two diploma planning officers • GIS specialist • A maps and digital information officer

03.05 Multipurpose Management of Forest Reserves project (cont.)

SSP/USD = 4

Project duration	Phase 1		Phase 2		Phase 3		Phase 4		% to total																						
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	Total					
Cost group																											SSP '000	USD '000	Total		
9 Motorbikes (for pilot watershed)					20																						20	5	0%		
10 Motorbikes (for pilot concession)						50																					50	13	0%		
7 Procurement of equipment							85																				230	58	1%		
1 ICT equipment for planning office and activities							25																				50	13	0%		
2 ICT equipment for central office							60																				180	45	1%		
3 Subsidies, equity and loans																															
1 Provision of cash and/or in-kind subsidies																															
2 Provision of training services to the private sector																															
3 Equity investments																															
4 Provision of loans																															
5 Social assistance/donation (Emergency)																															
Total (SSP '000)							2,661	6,128	7,531	6,460	2,648	3,150	228	315	98	54	564	42	42	42	42	42	42	42	42	42	42	30,005	7,501	100%	
Total (USD '000)							665	1,532	1,883	1,615	662	788	57	79	24	14	141	10	10	10	10	10	10	10	10	10	7,501	7,501	100%		
% to total							9%	20%	25%	22%	9%	10%	1%	1%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%			

Public sector project
Routine work by government
Private sector project
Routine work by private sector

4.4.6 Industrial-Scale Forest Plantations development for log production project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Forestry		
(2) Project name:	Industrial-scale forest plantations development for log production project		
(3) Project ID:	03.06 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2018/19	Ending FY: 2030/31	Duration (years): 13
(5) Total investment:	SSP 90,936,000	USD 22,734,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FO.SA4	Private sector projects and businesses	Table 2-3
(2) Government organisation:	07	MAF-FO	Directorate of Forestry	Table 2-6
(3) Activity types:	209	SP-EI	Service delivery and infrastructure development - Economic infrastructure development	Table 2-12
	301	PS-PR	Private sector - production	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	
	72	JG	Jonglei State	
	73	UT	Unity State	
	81	WA	Warrap State	
	82	NB	Northern Bahr el Ghazal State	
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	X
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	X
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	X
	06	PS	Private sector project	X
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	X
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	X
	41	PSI	Private sector Investment	X
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income		

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

The international community has, especially after the 1982 UN Conference on Environment and Development (UNCED, the "Rio Summit"), committed itself increasingly to balancing environment and development. In the forestry sector, increasing reluctance has been shown to harvest timber from natural forests and in a number of major countries such harvest has actually been banned or placed under severe restrictions regarding acceptable practice. Africa and South Sudan in particular, can only comply with this.

And yet, societal demands for construction materials, energy and social products (paper and boards especially) must be met and forests are the source of these; it is in this light that establishment of plantations becomes essential.

Given that to reach maturity for harvest, most products require a tree rotation of 30 years or more, decisions on plantations and practical investment in planting cannot wait till a market shortage occurs; they must be anticipated. South Sudan must assume that despite significant remaining natural forests and limited plantations from the past, it should act now to develop an industrial plantations resource. But plantations do not come cheap; investing in them must be based on sound information regarding anticipated future demand for wood products, estimates of available production capacity from existing natural and plantation forests, and accessibility of the wood, given expected environmental and economic restrictions on natural forests.

Demand: The demand for timber in South Sudan is not known. In preparing this project under the CAMP programme, an attempt has been made to provide a baseline estimate: Attachment 1 gives the assumptions and findings. The estimates arrived at give current demand levels as tabulated below:

Timber Product	Volume of Demand roundwood equivalent (m ³)
Saw and veneer logs	315,000
Sawnwood	56,300
Plywood	40,500
Total	411,800

In the absence of its own data, South Sudan's demand for imported sawnwood has to be guessed at from the decline in "former total Sudan" imports. A current annual figure of about 45,000m³ is about right, which means we are not double-counting in adding the roundwood equivalent (RWE) of sawnwood to the saw and veneer logs total above.

Using the above numbers, a first justification, for establishing local plantations which can in future sustainably support domestic processing of the above products, is that at an average price of US\$250/m³, logs of this volume would, if imported, cost some US\$103 million annually.¹²⁵

Attachment 1 also gives calculations for estimating the domestic supply potential for logs from which the processed products can be manufactured. No data have been found on unit area yield in South Sudan's natural woodlands and forests. Data on plantations, including the widely publicised teak plantations, are patchy at best. The CAMP Situation Analysis document reports some 70,160 ha of teak of which 20,000 ha is of good quality (Para 12.6.4). The same report (Table 12-12) mentions an alternative estimate of 36,548ha teak plantations of which an apparent 4,860 ha are leased out as concessions in National Forest Reserves in Central and Western Equatoria (Table 12-14).

In Attachment 1, this information has been used, with comparisons from elsewhere to check validity of yield and annual increment estimates. If we adopt the CAMP Situation Analysis reports of 36,548 ha for existing teak forests, then the net additional planting would have to be between 30,000 ha (at 30 m³ per ha per year) and 36,000 ha (at 20m³ per ha per year) to meet total internal demand. Correcting these for significantly lower annual increment levels observed for teak plantations would suggest need for far higher plantation targets; but decisions on this should await findings of the "National forest resources inventory, information and management plans" project.

Summary case for commercial plantations: The above notes refer to the likelihood of high

¹²⁵ FAO no longer publishes prices ("unit values") for saw and veneer logs. For 2012 total industrial roundwood the Africa average was \$218/m³ while for sawnwood it was \$269/m³. The roundwood average price is depressed by small-diameter pulpwood, which SS would not import hence decision to have a \$250/m³ average.

Items	Information
(2) Objectives:	<p>domestic demand, potential for exports (especially of high-value teak), environmental restrictions on natural forest harvest, high cost of imports and uncertainty about productivity levels. Together these considerations more than justify the implementation, sooner rather than later, of the proposed plantations project. Tree plantations are a long-term venture; if decisions and action are delayed, there are possibilities of facing shortages – this would be economically destructive and should therefore be unacceptable.</p> <ul style="list-style-type: none"> • To plan for a plantation programme (combining government and private planting) adequately sized to help satisfy South Sudan’s current and projected demand for wood products • To initiate planting by government at one location, at a 1,000 ha annual scale which gives a 30,000 ha full size forest at maturity (not pilot scale) • To vigorously pursue the earliest private sector takeover and, to this end, to develop workable incentives to attract investment but also to sustain management to maturity. • To build in-country capacities (public and private), if necessary extending to a second phase, and to consolidate government oversight and support capabilities for the private sector
(3) Overall description including temporal and spatial extent of project:	<p>South Sudan cannot allow itself to risk facing a time when existing supplies of industrial wood have nearly disappeared and new ones are not yet mature enough to harvest. For this reason, the public-sector part of the project on industrial-scale forest plantations development for logs should have started by 2018/19 for 13 years. The planting on private land would start, initially with strong government involvement, 2 years later in 2020/21 and proceed for 5 years to 2025/26.</p> <p>The limited duration (about half a rotation) reflects an assumption that private sector dominated tree planting project (“<u>Industrial-Scale Forest Plantations development for log production</u>” will be under full steam. Thus, with private sector funding alone, but with public-sector technical backstopping and regulatory oversight, it should continue till maturity rotation (about 30 years for softwoods and less for blue-gums). To secure good productivity so that log-producing plantations are profitable, activity must be only where rainfall is adequate. Hence focus is to be in Equatoria (E, C, and W) and Western Bahr El Ghazal.¹²⁶ If ecologists determine environmental acceptability, plantings can also be on the margins of the western and eastern floodplains to use retained groundwater.</p> <p>This project should be broken into a Phase I and Phase II, the latter focused on capacity-building consolidation, given the government’s responsibility for technical backstopping and regulatory oversight. Government engagement would then be oversight of private investment activities and administration of incentives.</p> <p>It is proposed that to avoid dispersal of efforts, the project start with no more than two sites of planting which should be selected because: (a) they have good prospects of high productivity, and (b) are near relatively good quality roads for access to markets.</p> <p>Implementation arrangements: establishing a large-scale plantation is a costly exercise and takes concentration and cannot be a part-time activity of a busy government department or directorate. It needs a dedicated team with administrative room for manoeuvre and spending authority (naturally with oversight); in the absence of this, tight deadlines in the planting, weeding etc. calendar can be missed and growth performance suffers, the result being lower than expected returns to effort. Government and its co-funding partners will need to find an institutional format that allows efficiency with accountability.</p>
(4) Component structure:	<p>Component 1: Industrial-scale government plantations on public land Component 2: Support to private sector commercial plantations development on private land Component 3: Capacity-building programme for industrial-scale forest plantations development</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

The broad difference in approach under the two components will be as follows: (a) under component 1 on the public land, government will with project resources carry out plantation establishment on a significant scale (1,000 ha per year). This is a kind of “incubation” activity to assure the private sector that it can be done. (b) after 5 years, government will under Component 2 aggressively promote private sector investment (Attachment 2 gives some notes) on private land, focusing on incentives and provision of technical backstopping and regulatory oversight. Government may at that time decide to even privatise its earlier plantings.

For reasons of economy, it is best that the planting is in blocks which are nearby or

¹²⁶ Private sector actors would make their own choices. But Ministry of agriculture to advise on most productive sites so that log-producing plantations are profitable. This also gives the advantage of rapid carbon-capture for trading.

Items	Information
	<p>contiguous.</p> <p>Component 1: Industrial-scale government plantations on public land</p> <p>Activity 1: Undertake (in cooperation with “market development and promotion for commercial forest products” project) a comprehensive study on current and future demand and supply of wood products and determine amount of afforestation needed to meet identified gaps, and a strategy for covering the needs. Output: Report on demand and supply status and prospects, with recommendations on scale of plantation effort needed.</p> <p>Activity 2: National forest plantations (public and private) development planning based on output of Activity 1. Selection of site for the initial government plantation and field demarcation - to compartment level for area to be planted in the first year. Output: National Plantations Development Plan, Strategy and Implementable Programme. Agreed location demarcated and compartments set out.</p> <p>Activity 3: National government afforestation in forest reserves. Implementation of plantation programme including construction of roads and/or tracks, offices, housing, etc.¹²⁷. Assume a block of eventually 30,000 ha planted at pace of a 30-year rotation.</p> <ul style="list-style-type: none"> Roads Housing and offices Equipment and field tools Nurseries and field preparation Vehicles <p>Output: Detailed investment programme and its implementation:</p> <p>Activity 4: Implementation of improved management of existing plantations Output: Better managed old plantations</p> <p>Component 2: Support to private sector commercial plantations development on private land</p> <p>Activity 5: Feasibility assessment, prioritization of private sector plantation investment opportunities Feasibility and prioritisation assessment of private sector afforestation. Data gathering (in cooperation with other resource projects) and analysis to determine (a) availability of suitable land and its ownership and/or tenure status; (b) estimation of investment levels and returns to investment effort for existing plantation forests and for new sites Output: Policy level report and Operational level annexes on plantation investments and recommended priority locations for them and Information and promotional documents for private investors</p> <p>Activity 6: Development, adoption and application of affordable incentives for private sector investment, in keeping with expected returns to investment. Review of international best practice and proposed adaptations to suit South Sudan conditions Consultations and follow-up with decision-makers until formal adoption Securing funding (some incentives would not need funding but fiscal exemptions) Publicity of incentives and invitation to invest, screening for seriousness and capacity; choice of winners and award of incentives entitlements. Complementary processes for investing in improving management of own existing forests and greenfield investments Output: Report drawing on international best practice¹²⁸ with design details of a non-complicated and sustainable incentives package which stresses exemptions more than heavy funding disbursements; information materials on incentives for use in investment promotion; award of investments to successful applicants; guidelines for screening applications for incentive benefits. Expertise: 3 months international consultant technical, 1 month financial; 3 months local</p> <p>Activity 7: Technical support to private commercial-scale forest plantation and log production Assessment of support needs of private planters (a) general extension – nursery to planting; (b) access to essential inputs and services (e.g. quality seeds, chemicals, pest and disease control etc); (c) research – initial focus on species and/or variety trials; (d) organisation of private operators. Work planning for support services delivery. Assessment of skills gaps and efficacy of institutional arrangements for plantation activities to recommend corrective action, including design of a</p>

¹²⁷ Attachment 3 gives costs for similar projects elsewhere, mainly in Asia under the Asian development Bank. A search for African projects has failed to yield project documents that reveal the same detail of cost breakdowns.

¹²⁸ But project “Forestry sector project preparation facility and sawlog plantations grant scheme fund” would have a modest Sawlog Plantations Grant scheme, fashioned after Uganda’s highly successful model.

Items	Information
	<p>capacity-building programme (followed by a fee on-the-job training and short courses at Forestry Training Centre at various levels) Initiation (in cooperation with project “Establishment of the Forest Research Institute”) of a research support programme including species and variety trials, eventual wood quality monitoring and long-term sample plots Development of external partnerships for best practice and capacity-building with industry associations in the development partner country (if any suitable) or in the sub-region.</p> <p>Output: Report on support needs of private planters; activation of support to private planters including an operational research programme</p> <p>Activity 8: Periodic review of effectiveness and efficiency of beneficiaries of incentives and proposals for adjustments (if any) to support measures or incentive packages Output: Reports; adjustments if warranted</p> <p>Activity 9: Establishment of oversight procedures for private sector plantations, including efficacy in applying best practice for productivity, modern environmental measures, tracking of carbon capture, compliance with sustainability requirements and with industry codes of practice etc. [can be joint with industry organisations] Output: Reports; their implementation</p> <p>Component 3: Capacity-building programme for industrial-scale forest plantations development</p> <p>Activity 10: Management plans for 10 selected National Forest Reserves to serve as pilots. Selection to reflect ecological contrasts and contrasts in encroachment pressure: low, medium, high. Assistance to willing states to develop their own management plans. Output: a series of management plans for project’s government plantations. Maps would generally be at 1:10,000 detail level</p> <p>Activity 11: Quality control, regulatory enforcement of private sector, concessionaires and community management plans. Output: Reports and follow-up enforcement on management plans of concession-holders and communities and GPS based records of boundaries where possible The activities would, with suitable adjustment to plantation rather than natural forest conditions, be as for Activities 4 and 5 of the project “<u>Multipurpose Management of Forest Reserves</u>”. Resources and/or facilities for the plantation management planning would add another 20% on those for Activities 4 and 5 of the project “<u>Multipurpose Management of Forest Reserves</u>”.</p> <p>Activity 12: Assess skill gaps and efficacy of institutional arrangements for plantation activities and recommend corrective action, including design of a capacity-building programme Output: Report on capacity building, training and organisational adjustments needed</p> <p>Activity 13: On-the-job training and short courses at Forestry Training Centre at various levels. Output: More skilled staff and/or assistants, including from the private sector</p> <p>Activity 14: Review of conditions for possible privatisation or PPP arrangements for government plantations and the readiness of South Sudan-based private sector investors to participate in such privatisation of government plantations Output: Report with recommendations including on need, if any for adaptation of overall PPP procedures and protocols to the forestry sector, especially given its long rotations and definition of respective roles</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<ul style="list-style-type: none"> • Afforestation and Natural Forest Conservation • Survey and Inventory Department (staff of Forest Inventory project) • Support from Forest Economics and Programme for planning and for design and management of incentives
(2) Description of beneficiaries within the framework of the project:	<ul style="list-style-type: none"> • The Forestry Directorate (especially the Afforestation and Natural Forest Conservation Department) would be the most direct beneficiary in terms of updated knowledge of the assets it is managing and capacity to manage them. • Communities in the plantation areas (jobs) • Private sector as successor of plantations programme • Associations of private sector firms in terms of capacity development for their members

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<p>Government Plantation programme:</p> <ul style="list-style-type: none"> • Plantation development plans and/or strategy • Plantation activity started in 1 location at substantial scale • Arrangements for private sector engagement, including incentives for it, in place • Impact: expanded plantations for wood supply. <p>Private land plantations:</p> <ul style="list-style-type: none"> • Plantation activity started
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Items	Information					
(2) EIRR and/or FIRR, and/or other economic analysis:	<ul style="list-style-type: none"> Impact: expanded plantations for wood supply. (if applicable)					
2.5 Environmental and social impact, and mitigation measures						
(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td> Negative: b Positive: c </td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: b Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society			
Negative: b Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society					
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	(Negative) <ul style="list-style-type: none"> If areas that include natural vegetation among the plantation blocks and that protect riverside natural vegetation are not enforced, activity could reduce biological richness of landscapes. (Positive) <ul style="list-style-type: none"> Plantations reduce pressure on ecologically complex and biodiverse natural forests and can themselves be established and managed in an environmentally sound manner. 					
2.6 Monitoring and evaluation for impact measurement						
(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> Existence of a plantations development strategy with baseline information on demand and supply to justify them Number and area plantations (public and private) State of plantations Existence of a research programme in support of plantations development existing and new Number and state of organisations of private sector firms engaged in forest plantations Staff numbers by level of training 					
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> As at the starting point (to allow direct comparison) 					
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> Surveys Checking documentation 					
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> Forestry Directorate management Missions, including government and/or development partner periodic progress-review missions 					
2.7 Required human resources						
(1) Principle of human resources management:	Management level oversight over project; in addition: <ul style="list-style-type: none"> Gender sensitive but competency and/or merit-based selection of counterpart staff (already competent or with good prospects of quick learning) Assignment of technically competent personnel and juniors able to learn Efficient and effective engagement of consultants and specialists outside of the government; all external experts to have a trainable counterpart Sufficient staffing 					
(2) Required human resources in the public sector (Positions, grades and numbers):	Long-term staff: <ul style="list-style-type: none"> Government plantations: (a) Full time Senior level officer to lead team; (b) Lead plantations management plans officer; (c) Lead field operations officer and 2 field supervisors and 2 assistants; Field teams: initially 3 (1 survey, 1 fire observation, 1 security and patrols) Private land plantations: (a) Full time Senior level officer to lead team; (b) Lead plantations management plans support officer; (c) Lead field operations extension officer and 4 assistants 					
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	Paid Consultants/short-term teams: <ul style="list-style-type: none"> Government plantations: (a) Field labour (from nursery to planting and weeding) (b) Technical advisors (planning tasks, initial detailed studies, capacity building requirements assessment) Private land plantations: Technical advisors (planning tasks, initial detailed studies, design and introduction of incentives, capacity building requirements assessment) Volunteers: <ul style="list-style-type: none"> Counterpart leader from association of private sector firms Managers of each private plantation site Field teams (supervisory and labour) 					
2.8 Risk assessment with respect to project objectives and resources to be applied						
(1) Expected level of risk:	<table border="1"> <tr> <td>M</td> <td>L: Low</td> <td>M: Medium</td> <td>H: High</td> <td>(select an indicator from the list)</td> </tr> </table>	M	L: Low	M: Medium	H: High	(select an indicator from the list)
M	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	Government Plantation programme: <ul style="list-style-type: none"> Implementation of the project itself faces very low risk except for initial low productivity in all tasks (nursery to field) due to low skills. Private plantations: <ul style="list-style-type: none"> A key risk is abuse of incentives by beneficiaries (diversion to non-plantation investments or consumption) and of corruption by public servants in delivering incentives 					

Items	Information
	<ul style="list-style-type: none"> • For this reason as much as possible (other than cash planting grants), incentives should take on a non-cash nature.

2.9 Other special considerations and/or notes

<p>(1) Other special considerations and/or notes:</p>	<ul style="list-style-type: none"> • Government Plantations: Crucial that all states are fully on board regarding basis for prioritising only a very few locations for plantation development • Private plantations: Develop incentives with care ensuring that they make economic sense (Potential source countries for best practice have been mentioned under 2.1 (2)) e.g.: cover public goods beyond private company gain; catalyse more investment than they cost; are not a major drain on government treasury; and are adapted as forests grow so that they cover incentives to plant, manage well and then to add value. The private investors will be easier to service if they are organised; efforts to help them do this are very worthwhile
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2.10 Routine operation and required resources after the completion of the project

<p>(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.</p>	<ul style="list-style-type: none"> • Expansion of planting (preferably by private sector) • Government staff reduced but to remain adequate for focus on oversight; management of incentive scheme; research support
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Attachment 1: Background on Estimation of Baseline Consumption of Processed Forest Products in South Sudan

Demand: The demand for timber in South Sudan is not known But South Sudan is a country that has recently emerged from war and needs to reconstruct. When the construction materials needs for this are added to demand for routine development, the call for assured raw material availability becomes compellingly important. Timber is among the materials most often used in construction; in a country at South Sudan's level of economic development, key wood products will include sawn timber and plywood. In the project profile for the project *Market development and promotion for commercial forestry wood products*, South Sudan's baseline annual consumption levels have been estimated using East Africa-wide coefficients. The roundwood equivalents are about: 252,000 m³ for saw and veneer logs; 45,000 m³ for sawnwood; and 40,500 m³ for wood-based panels¹²⁹. It is safe to assume that 80% of the panels are plywood, which would mean 32,400m³.

Eastern Africa coefficients are for a set of countries that, unlike South Sudan, were not engaged in post-conflict reconstruction; therefore we need to augment the above baseline consumption levels somewhat. A conservative but sensible scenario would see South Sudan's annual consumption levels some 25% higher than the above estimates, which would mean the following:

Timber Product	Volume of Demand [roundwood equivalent (m ³)]
Saw and veneer logs	315,000
Sawnwood	56,300
Plywood	40,500
Total	411,800

In the absence of its own data, South Sudan's demand for imported sawnwood has to be guessed at from the decline in "former total Sudan" imports. A current annual figure of about 45,000m³ is about right, which means we are not double-counting in adding sawnwood RWE to the saw and veneer logs total above.

In a world of liberalised economies, a first assumption would be that South Sudan should import what it does not have, unless it proves cheaper to produce domestically. This project is formulated on the assumption that in fact for this landlocked country, consuming as it does comparatively minute volumes on a global scale of saw/veneer logs, to purchase sawnwood and plywood internationally in small lots would cost it dearly. "Small lots" because the total for each of these products (e.g. sawnwood) is not uniform in grade and type but a lot of different sizes and a combination of utility and decorative timbers, all in many species. South Sudan should therefore reverse the thinking process in deciding what to do; first determine if local production is possible and seek imports only to fill gaps. The exceptions are for reconstituted panel products (where total consumption each sub-type is too small to allow economies of scale) and paper and board products (for the same reason).

It should be noted that at an average price of US\$250/m³ logs of this volume would, if imported, cost some US\$103 million annually.¹³⁰ The country would then have to spend even more to process the imported logs into primary marketable products.

Supply: Both sawn timber and plywood require logs of relatively large size, i.e. from old growth trees in natural forests or from long-rotation plantations. No data have been found on unit area yield in South Sudan's natural woodlands and forests. But much of this being a relatively dry country, yields are unlikely to be much higher than in Southern Africa's savannas where Chidumayo and Gumbo¹³¹ mention commercial volumes as low as 6.8m³/ha in Zambia and growth rates of 0.4-1.6m³/ha for all species in Mozambique. In Tanzania, they report commercial trees with diameter exceeding 50cm made up only 4% of total stock and 25% of volume; in Zimbabwe, standing volume averaged 72-86m³/ha and increment 0.78-1.20m³/ha per year. Consequently, in all these countries, selective cutting (harvest) cycles are as long as 30-40 years, with top diameter reduced to 30cm to make the harvest worthwhile. Using these rough numbers one could estimate what South Sudan could produce sustainably, but the resource information is inadequate at present. For plantations, the CAMP Situation analysis document reports some 70,160ha of teak of which 20,000ha is of good quality (Para 12.6.4). The same report (Table 12-12) mentions an alternative estimate of 36,548ha teak plantations of which an apparent 4,860ha are leased out as concessions in National Forest Reserves in Central and Western Equatoria (Table 12-14).

With this uncertainty about production potential of both natural forests and of plantations, it is impossible to say to what extent what exists can cover or exceed South Sudan's domestic demand, let alone the potential for sustainable exports. For any additional plantations one can expect 25 – 35 year rotations; for eucalypts, perhaps 5 – 10 years less. If all the logs come from plantations, then to meet only the annual domestic market demand (=annual harvest level) of about 412,000 m³ of roundwood would require a planted area that would vary according to productivity.

¹²⁹ Other forest products (reconstituted panels) will tend to be used in small enough quantities that are more feasible to import than to manufacture domestically.

¹³⁰ FAO no longer publishes prices ("unit values") for saw and veneer logs. For 2012 total industrial roundwood the Africa average was \$218/m³ while for sawnwood it was \$269/m³. The roundwood average price is depressed by small-diameter pulpwood, which SS would not import hence decision to have a \$250/m³ average.

¹³¹ Chidumayo, E.N and D.J.Gumbo (Eds), 2010: *The Dry Forests and Woodlands of Africa—Managing for Products and Services*. Earthscan. ISBN: 978-1-84971-131-9

If average annual increment is 30 m³/ha/year of gross wood biomass on a 30-year rotation and a merchantable volume ratio of 30% on gross biomass, annual planting of some 1,500ha would be needed (45,000ha total at end of rotation). In reality, a realistic average increment is more likely to be on average between 20 and 25m³/ha/year; the 20m³ worst case level would require some 2,300ha/year (69,000ha total at end of rotation). *If we adopt the CAMP Situation Analysis reports of 36,548ha for existing teak forests, then the net additional planting would have to be between 9,000ha (at 30m³/ha/year) and 36,000ha (at 20m³/ha/year) to meet total internal demand.* This makes a major difference to scale of investment and therefore must be checked at the earliest opportunity.

Available in-country productivity information¹³² gives a merchantable logs yield for teak plantations of between 100 and 286m³/ha at final harvest (silent on yields at thinning stage). If we assume a 30-year rotation, these figures would equal only 3.3 – 9.5m³/ha annual increment. If this is the case, then a far larger annual planting area than speculated earlier would be needed. Two other actions can augment wood supply: (a) better management of existing plantations whose productivity may be stagnant for lack of silvicultural treatment; and (b) future sourcing of wood also from forests being planted for non-industrial purposes, for example plantings for carbon capture under REDD or similar initiatives.¹³³ Their carbon would stay in the sequestration loop long enough for it to be sellable to climate funds.

Priority action in planning: The elements for deciding on investment levels are both demand and supply and their future trajectories. As can be seen from section 2.2(1) above, available information cannot be relied upon. It is therefore critically important that very early after launch, the project National forest resources inventory and information management plans re-checks the area and condition of remaining plantation areas. Simultaneously, the project on *Market development and promotion for commercial forestry wood products* should clarify demand estimates and projections. The net deficit can then be calculated and area of additional planting (and investment levels) determined. The inventory project can then prioritise identification of sites where additional planting should be done; ideally, such locations should be where there is little likelihood of land-use change away from forests.

¹³² All sources are silent on yield levels for natural forests and woodlands and give estimates only for teak plantations. (a) "Forest Management Plan". Equatorial Teak Company, 08 May 2012. (b) "Forest Inventory Report: Kagelu Forest Reserve, Yei River County (9 June 2010)" (c) "Forest Inventory Report: Nyin-Akok Forest Reserve, Jur River County (March 2012)". Land Survey and Information Centre, Norwegian Forestry Group, Forest Sector Programme for South Sudan 2007-11

¹³³ For example, in 2010 Green Resources proposed the "Tindilo Reduced Emissions from Deforestation and Degradation (REDD) Project" which will plant 23,000ha of commercial and prevent deforestation over 156,624ha of savanna woodland. Of the commercial wood processing activities, it specifies only charcoal.

Attachment 2: Notes on Focus of Private Sector Commercial-Scale Plantations Development Component

The private sector component of the project would, in synergy with plantation efforts on public land, help South Sudan to avoid a possible situation whereby existing supplies of industrial wood have nearly disappeared and new ones are not yet mature enough to harvest. Nevertheless, it seems best for government to try out plantations first on public land (from 2017/18) under its component, with the private sector one starting two years later, in 2019/20 for 6 years with intense government project support (technical backstopping and regulatory oversight), details of which would be worked out at Phase II. It could have been rushed more but the private sector in the country is still very fragile and most likely many companies would have, at this very early stage, shied away from the long-term commitment that forestry means.

The limited duration (far shorter than a rotation) reflects an assumption that the package of incentives developed by the project will be so effective as to allow total replacement of government efforts by the private sector by the end of 10 years.

Given the particularly commercial orientation of this project, it is essential that among its activities should be **development and implementation of incentives for private sector or public/private partnership investments into forestry**. The project can be guided by experience in countries such as Argentina, **Brazil** and Chile, which have successfully applied them for a time to establish forests, to ensure quality management, and sustainable application of best practice. As outlined in several reviews, incentives must (a) focus on covering the cost of generating “public goods” benefits beyond the interest of a private company and (b) must have a positive rate of return. For example, in **Chile**, the estimated internal rate of return to (mostly) tax incentives was around 15% - higher than most other investments the country made over decades.

It is believed that Chile’s public incentive programme costing only US\$140 million but triggered US\$4,000 million worth of private planting, management and processing investments. In **Argentina** government offered US\$340-700/ha for planting and US\$40/ha for pruning and US\$50/ha for thinning. Other details are available in a set of compiled papers.¹³⁴ Closer to home, **Uganda** operates a Sawlog Production Grant Scheme (SPGS)¹³⁵ under which 34,500ha of plantations have been established so far; the grant initially covered only planting but has recently been extended to pruning and thinning operations.

¹³⁴ See Chipeta and Joshi (Eds), 2001: *The private sector speaks: Investing in Sustainable Forest Management*. ISBN 979-8764-72-2. Centre for International Forestry Research (CIFOR), Bogor, Indonesia. Also, in summarised form, see Chipeta and Joshi (Eds), 2001: *Financing Sustainable Forest Management – Report of the International Workshop of Experts*. 22-25 January 2001, Oslo, Norway. ISBN 979-8764-68-4. Centre for International Forestry Research (CIFOR), Bogor, Indonesia.

¹³⁵ Kakungulu, Z and A. Akasiibayo, 2013: SPGS Progress, Achievements and the Future. SPGS Newsletter, Issue No 36, p6. June-August 2013.

Attachment 3: Comparative cost levels and profiles from other countries

INFRASTRUCTURE:

Asian Development Bank Indonesia norms road density in forests: main access roads 5.40 metres/ha; secondary roads 8.73 metres/ha // 4 earth dams for fire protection and to serve nurseries ADB Vietnam 2007 was \$25,540/km

COSTS OF ESTABLISHING PLANTATIONS:

ADB 2005 Vietnam Industrial Plantations Project (No20067) cost profile for an enterprise plantation (i.e. not owned by an individual or farmer) totalled US\$963/ha.; the quantities are in (brackets) broken down it is as follows:

Year 1 (\$847/ha sub-total):

- land clearing including bulldozer/tipper hire = US\$193/ha (1 ha);
- Soil preparation = \$97/ha (1 ha);
- Labour for digging planting pits = \$32/ha (1666 holes);
- Fencing (200 poles, 12 rolls barbed wire, 3kg nails, labour = \$222/ha;
- Planting = \$32/ha (1666holes);
- Weeding = \$72/ha (3ha);
- Fertilising = 24/ha;
- Fertiliser = \$58/ha (5 bags);
- Seedlings = \$77/ha (1999 – 20% for wastage);
- Seedlings transport = \$19/ha (1999);
- 3metre Firebreak establishment = \$19/ha (400 metres).

Year 2 (\$63/ha sub-total):

- Weeding \$48/ha;
- Firebreak clearing = \$14/ha (400 metres).

Year 3 (\$39 sub-total):

- Weeding \$24/ha;
- Firebreak clearing = \$14/ha (400 metres).

Year 4-6:

- Firebreak clearing = \$14/ha (400 metres).

In the ADB's 2007 plantations programme in Vietnam (Project 29204):

- Production plantation 14000ha US\$213/ha;
- Enrichment planting US\$280/ha; protection forest planting US\$328/ha
- Overall average cost profile for 4 provinces was (rounded %ges):
Planting in protection forests 20%;
Enrichment planting 5%;
Forest protection 12%;
Afforestation 12%;
agroforestry 30%;
rural infrastructure 23% (inter-village roads being 8%, schools 5%, health posts <1%).

If only afforestation is considered, the totals were:

- Afforestation 50%
- Roads 25%
- Schools 20%
- Health 5%.

World Bank 2013 Bangladesh indicative costs for plantations of 7000-10,000ha:

Block plantation:

- Coastal US\$700/ha
- Hilly US\$920
- Strip planting US\$180/km.

03.06 Industrial-Scale Forest Plantations development for log production project (cont.)

Cost group	Phase 1		Phase 2		Phase 3		Phase 4		Total																			
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000	% to total	
Project duration																												
Total (SSP '000)				940	28,077	2,620	3,040	3,256	3,248	3,301	3,250	3,303	3,835	3,406	28,147	3,513											90,936	100%
Total (USD '000)				235	7,019	655	760	814	812	825	813	826	959	852	7,287	878											22,734	100%
% to total				1%	31%	3%	3%	4%	4%	4%	4%	4%	4%	4%	32%	4%												

Public sector project
Private sector project
Routine work by government
Routine work by private sector

4.4.7 Fuelwood and Charcoal Value Chains - sustainable production and efficiency improvement project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Forestry		
(2) Project name:	Fuelwood and charcoal value chains - sustainable production and efficiency ¹³⁶ improvement project		
(3) Project ID:	0307	01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development	
(4) Start and ending fiscal year:	Starting FY: 2015/16	Ending FY: 2020/21	Duration (years): 6
(5) Total investment:	SSP 14,313,000	USD 3,578,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FO.SA7	Community forestry, agroforestry and smallholder forestry and tree growing on private lands	Table 2-3
(2) Government organisation:	07	MAF-FO	Directorate of Forestry	Table 2-6
(3) Activity types:	203	SP-EX	Service delivery and Infrastructure development - extension and training	Table 2-12
	301	PS-PR	Private sector - production	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	X
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sorbat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	X
	52	NGL	NGO loans and equity financing	

¹³⁶ Build in and seek a market for carbon credits for yield improvements relative to current situation.

Items	Information		
61	FGI	Financed by generated income	

Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

Charcoal and fuelwood have important social dimensions which apply everywhere in the country and to almost all social strata. They are also commodities with the most visible and direct impact on women, who must therefore be prominent in seeking solutions.

Charcoal and fuelwood can be harvested and/or made from even small-diameter vegetation, such as shrubs rather than only trees of mature dimension. It is therefore proposed that the project operates anywhere in the country where raw material can be found, especially where roads permit affordable transport to urban centres that offer concentrated demand for both fuelwood and charcoal.

There are two main dimensions to the project: (a) assuring sustainable management of wood to use directly as fuel and to convert into charcoal (management of forests, woodlots, shrubs, etc.) and (b) enhancement in efficiency of converting fuelwood to charcoal. There are many other areas of efficiency improvement but many of these are to do with business management and logistics: it may be best to leave these to the small-scale entrepreneurs who will almost always dominate this sub-sector. The business chambers could assist by organising operators for scale economies and stable supply and pricing.

Justification: With this background, justification for attention to fuelwood and charcoal comes from the universality of use and the social impact if supply lines are unreliable and supplies are inadequate (nutrition, health, high prices). Fuelwood and charcoal are domestic fuels and the impact of shortages on households can be immediate and brutal. Fuelwood is also critical for curing bricks (a construction material essential in a growing economy) and for drying certain agricultural products.

Furthermore, fuelwood and charcoal enterprises, being of generally small and medium scale and widely distributed, have an extraordinary capacity to create jobs; in this way they reflect well the spirit of the SSDP which places highest among its criteria for prioritizing public expenditure the "potential for quick poverty-reducing growth". It will be important that the project does not change the fundamental attributes of fuelwood and/or charcoal enterprises by replacing them with industrial-scale entities owned by only a few investors. Focus of the project should therefore be on improving the organisation of the smaller producers and their technical efficiency.

Managing Demand and Promoting Efficiency in End-use: On the demand side, there also much room for efficiency gains. By not wasting energy, through the adoption of fuel-saving cooking devices (for fuelwood and charcoal), and by adjusting cooking habits, consumers can also reduce demand. Efficiency gains at the consumer end may, unlike those at the producer end, cannot be easy to certify for the carbon trade but they are nevertheless worthwhile.

Including poles: Finally: fuelwood and charcoal are made from tree sizes that also yield poles. Poles are a much more popular construction material than sawnwood in many African towns, especially in lower and medium income settlements; they are also popular for scaffolding in more high-rise urban construction. It would thus be best that harvesting of poles for construction and power-transmission¹³⁷ is added to the fuelwood/charcoal enterprise activity.

(2) Objectives:

- To identify main areas/locations of opportunity for fuelwood/charcoal (and associated construction poles) enterprises.
- To place fuelwood/charcoal development in the national context by highlighting in the plans the importance of fuelwood/charcoal in the national energy mix, both for development and for subsistence/household use.
- To help organise the generally small/medium entrepreneurs for collective self-improvement so they can deliver at a better scale, more reliably and with more stable and/or reasonable prices. Organisational support may address any key challenges including possibly financing.
- To raise the efficiency of charcoal burning, mostly thorough training for reduced waste in carbonisation.
- To raise efficiency in use by promoting energy-saving devices and practices.

(3) Overall description including temporal and spatial extent of

Project start is proposed for 2015/16, with project to run for 6 years when it can become an almost entirely private sector operation, the government role then being oversight.

¹³⁷ Creosote treatment of power-transmission poles to protect them against rot or termite damage has been built into the project "Development of industrial processing and manufacturing of timber products project" (Activity 4). But the growing of such poles fits in well with growing of small-diameter wood for fuelwood and charcoal so power-poles can be on the menu of products alongside fuelwood.

Items	Information
project:	<p>Scope: To fulfil the poverty-reducing attributes of the sub-sector as outlined under 2.1(1) above, it is best if the project has the following main elements:</p> <ul style="list-style-type: none"> • Improving the raw material base for fuelwood and charcoal, including supporting planting additional wood for sustainable supplies; • Organisational assistance to the dominant small and medium-scale entrepreneurs to produce, transport, store and sell products more reliably and at stable prices; • Technical support (especially training) to charcoal makers to improve yields, especially by reducing waste in carbonisation. <p>Locating for profitability: Geographically, the project activities have to be largely demand-driven. Both fuelwood and charcoal are thus best produced mostly in locations where transport to main demand centres (urban areas) is economically feasible. It is generally pointless to make fuelwood and charcoal simply because wood is abundant if delivering the product to market then cancels profitability.</p> <p>Caution on technological choice: There is often temptation to improve charcoal burning by replacing traditional mounds or pits with metal carbonising chambers. This raises capital investment costs and often replaces the existing entrepreneurs with larger ones – unnecessary social dislocation occurs and yet cannot be justified.</p> <p>In reality, charcoal yield efficiency is about skills, especially in sorting wood billets by diameter class and packing them for even spaces among pieces. A traditional pit or mound can have just as high a yield as a metal structure if sorting is done strictly; a metal structure can have as low a yield (or lower) as a pit or mound if it is loaded haphazardly and air is poorly controlled. The project should refrain from socially dislocating the industry by encouraging unnecessary capital intensity through insistence on metal-furnace technology.</p> <p>At the consumer end, fabrication of fuel-efficient stoves for fuelwood or charcoal can be done by artisans or in factories. For keeping the social inclusiveness of the fuel industry, it may be best to favour an artisanal industry even if the level of fuel efficiency of the devices cannot be as high as in factory-made devices. Perhaps both sources of fabrication should be encouraged and the consumer will show her and/or his preferences.</p> <p>Efficiency in use: Much of the efficiency gain from raising charcoal yield per unit raw fuelwood can continue to be lost, if consumers continue to cook carelessly (habits) or to use inefficient cooking places or devices. There should be intervention at this end too.</p>
(4) Component structure:	<p>Component 1: Planning assistance to the development of sustainable fuelwood and charcoal enterprises (including using wastes from natural forest and plantation concessions) with deliberate incorporation of recording for carbon credits and certification</p> <p>Component 2: Support to the organization of value chain players (many individual and group actors expected to be of small and medium scale) and pilot support to management and/or establishment of sustainable raw material sources for fuelwood and/or charcoal but also for poles.</p> <p>Component 3: Training for efficiency of charcoal production with focus on enhancing yields and reduced wastage</p> <p>Component 4: Promoting fuelwood and charcoal saving practices and devices among consumers</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>As suggested in section 2.1(2), on the production efficiency improvement side the project should focus on states where raw material availability is best. This would generally mean the three Equatorias and Western Bahr el Ghazal. But demand is nationwide, so on improving fuelwood and charcoal-saving, the project should concentrate on demand centres (cities, brick-burning centres) even outside the raw material locations. Project implementation work would preferably be in cooperation with the ministry responsible for industry and with the Chamber of Commerce, Industry and Agriculture.</p> <p>Component 1: Planning assistance to the development of sustainable fuelwood and charcoal enterprises (including using wastes from natural forest and plantation concessions) with deliberate incorporation of recording for carbon credits and certification</p> <p>Activity 1: Study of fuelwood and/or charcoal (a) for contextualisation in the national energy mix, with focus on highlighting their economic development relevance (not just household use); (b) to characterise the Fuelwood and/or Charcoal Value Chain and its attributes and key stakeholders – pay specific attention to gender roles from production to marketing and consumption; (c) critical characteristics of supply, prices, and market-supply links.</p>

Items	Information
	<p>Output: Report and policy-makers' brief; Sub-Report on Gender in the Fuelwood and/or Charcoal value chains; Elements for inclusion into national energy policy and strategy; publicity events at policy level for all concerned sectors</p> <p>Activity 2: Matching study mainly for fuelwood and charcoal but also for construction and power-transmission poles: linking location of main demand to location of raw materials availability¹³⁸ and potential; and, to ease of access to roads for reaching main markets.</p> <p>Output: Study Report equivalent to a Master Plan for the Fuelwood and/or Charcoal Value Chain; Costed workplan for project activities. Specific plan for pilots (component 2).</p> <p>Component 2: Support to the organization of value chain players (many individual and group actors expected to be of small and medium scale) and pilot support to management and/or establishment of sustainable raw material sources for fuelwood and/or charcoal but also for poles.</p> <p>Activity 3: Selection of 10 pilot sites (one each in each state in locations where fuelwood and/or charcoal is already significant and one each near the three primary urban centres of Juba, Malakal and Wau) and strengthening of existing tree-growing or management activities based on better organisation, supply of seedlings, better codes of conduct, and group enforcement of discipline in harvest and replanting.</p> <p>Outputs: Operational workplan (including harvest plan) for each pilot site and development at each site of nursery and allied support elements (extension, land clearing, forest tracks etc) for management of tree resources. A few sites may be based only on natural vegetation, without planting.</p> <p>Activity 4: At each pilot location, expand planting especially for poles and manage through proper thinning regime for high proportion of quality poles for use especially as power-transmission poles but also in construction (scaffolding, utility).</p> <p>Output: Dedicated woodlots for power-transmission poles and management of the rest for high proportion of poles</p> <p>Activity 5(a): At a key brick-making location near each of the three major cities, negotiate for land and establish a fuelwood plantation to be co-managed by an organisation of the brick-makers for sustained fuelwood supply – to be run as a business with the produce sold to the brick businesses. Provide extension support and quality seedlings for high productivity.</p> <p>Output: Dedicated woodlots at brick-making centres; - could be owned by fuelwood traders instead of brick-maker organisations. Guidelines for fuel-efficient burning of bricks</p> <p>Activity 5(b): At six artisanal (informal) bakeries (2 each in the three major cities Juba, Malakal and Wau) review fuelwood/charcoal use efficiency and design improvements to equipment and procedures for reduce energy wastage. Pay for upgrade of equipment for efficiency and provide extension support.</p> <p>Output: Reduced wood/charcoal consumption in baking; 3 extension agents trained; 6 oven operators trained; 20 oven operators from outside the trial bakeries trained; Guidelines issued for fuel-efficient baking of bread in small/medium enterprises.</p> <p>Component 3: Training for efficiency of charcoal production with focus on enhancing yields and reduced wastage</p> <p>Activity 6: In the same 10 pilot locations (see activity 3), organisation of charcoal burners and of fuelwood and/or charcoal traders, with counterpart organisation in the key market centres of Juba, Malakal and Wau. Including expansion or establishment of storage facilities and working capital revolving loan scheme (at least partly SACCO-based for sustainability).</p> <p>Outputs: Strengthened or new organisation(s) of value-chain actors; organised charcoaling sites; sales sheds (2 in each?) in town outlets, with packing facilities; fuelwood and/or charcoal window for working capital loans or in SACCOs or own SACCOs</p> <p>Activity 7: At the most promising 3 of the 10 pilot sites, undertake training for at least 10% of the charcoal-burners from all 10 pilot areas in correct technology for boosting charcoal yield during carbonisation (size-selection of wood; proper packing; control of air etc.) and proper handling and packing for reduced fragmentation of coals.</p> <p>Outputs: Hands-on training by demonstration of proper charcoaling for high yield. Focus on selecting best performers as burners from the 10 pilots to be trained as trainers at the three selected training pilot centres.</p> <p>Activity 8: In the course of the training activity, build in a “before” and “after” efficiency gains carbon measurement regime on which to base estimation of carbon credits as skills are progressively mainstreamed in production areas.</p> <p>Outputs: estimates of carbon release reductions due to more efficient carbonisation.</p>

¹³⁸ Raw material sources to include natural woodlands/scrubland; planted woodlots/line plantings; agroforestry in all its forms; waste from timber harvest concessions and processing mills etc.

Items	Information
	<p>For application to full-scale production areas and introduction into a national carbon trade should South Sudan develop one.</p> <p>Component 4: Promoting fuelwood and charcoal saving practices and devices among consumers</p> <p>Activity 9: Review and shortlisting of fuelwood – saving campaign approaches and devices in South Sudan and neighbouring countries (focus on Kenya, Tanzania, Ethiopia) with potential for adaptation to South Sudan</p> <p>Outputs: Report with recommendations for adaptation options for South Sudan and proposals for implementation.</p> <p>Activity 10: Promotional campaign for fuelwood saving in household – low-cost devices, lifestyle adjustments, cooking habits etc [Contracts: (a) An NGO for the promotional work including artisanal manufacture of devices – Lump Sum; (b) the Polytechnic Engineering department – for quality control. Smaller Lump sum]</p> <p>Outputs: Report with recommendations for adaptation options for South Sudan and proposals for implementation.</p> <p>Activity 11: In Juba, Malakal and Wau - training for household energy efficiency of (a) technicians (both men and women) for the artisanal cooking devices; (b) women extension agents and/or mobilisers for promoting energy-efficient lifestyle and/or cooking habits; (c) fuelwood – charcoal traders – exposure to notions of wood and charcoal efficiency in use.</p> <p>Outputs: Trained people for household efficiency improvement, especially for extension.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<ul style="list-style-type: none"> • The Forestry Directorate’s Agroforestry and Forestry Extension Department in cooperation with Forest Industry Department (charcoal improvement component) • The Chamber of Commerce, Industry and Agriculture will be a key facilitator of getting private small and medium-scale entrepreneurs’ buy-in and participation; • The Ministry of Industry or Ministry of Local Government at decentralised level will be the licensing authorities. • Women’s organisations with demonstrated efficiency and commitments could be the NGOs selected to carry out promotion of fuel-efficient lifestyles, cooking habits and adoption of fuel-efficient devices. Other women’s organisations could be encouraged to do the trade and inventory financing in fuelwood and/or charcoal trading. • The Ministry of Labour is key to good industrial training activities. The charcoaling sub-sector is large enough to warrant a recognised qualification and for which to develop a possible national apprenticeship scheme (for charcoaling but also perhaps for fabrication of fuel-efficient cooking devices).
(2) Description of beneficiaries within the framework of the project:	<ul style="list-style-type: none"> • Actors in the fuelwood and/or charcoal value chain will be the most direct beneficiaries in terms of better organisation for stable businesses, inputs provision, possibly funding access and more profitable and/or higher-yield business. • Fuelwood and charcoal consumers due to better efficiency in both charcoal production (could moderate prices) and efficiency in use (less fuel per cooking event) • Government (especially the Ministry of Agriculture’s Forestry Directorate) but also the Ministry of Industry, will gain primarily from capacity-building. • Women’s organisations selected as the NGOs for promotion of fuel-efficient lifestyles, cooking habits and adoption of fuel-efficient devices and possibly also for microfinancing fuelwood/charcoal trading. • It will also be important to also assist appropriate units responsible for forest products in the Chamber of Commerce, Industry and Agriculture.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<ul style="list-style-type: none"> • Master Plan for Fuelwood and Charcoal development with clear priorities and elements for inclusion into national energy policy and strategy • Stabilised fuelwood and charcoal availability and more reliable market in availability and prices • Operational pilots for sustainable management of fuelwood resources and for charcoaling • Skills developed for efficient charcoaling for higher yields and lower carbon release • More efficient use of fuelwood and charcoal in brick industry and in urban households • Contribution to quality poles availability for construction sector and power transmission
(2) EIRR and/or FIRR, and/or other economic analysis:	<ul style="list-style-type: none"> • At project finalisation stage

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td> Negative: b Positive: c </td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: b Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: b Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		

Items	Information
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Positive)</p> <ul style="list-style-type: none"> • High impact on environment if charcoal yield increases – less pollution and lower climate change footprint • Social benefits include a) skills introduced; b) steady employment and income brought near; c) more sustained business; and d) lower consumer expenditure on fuelwood and charcoal from more efficient use. • Extraordinary level of attention in section 2.2(1) to women’s participation especially in trading of charcoal and fuelwood and in extension work for raising efficiency of fuel in use.

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • Change in output of fuelwood and charcoal, construction and power transmission poles • Change in conversion coefficients from raw wood into charcoal output and therefore also in carbon release • Stability of fuelwood and charcoal availability and prices in three main cities • Greater efficiency in household use of fuelwood/charcoal and in brick industry
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • Same as at the start, to allow comparison
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> • Baseline study; missions and consultant surveys.
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> • Directorate of Forestry’s internal M&E; donor and/or Government periodic review missions

2.7 Required human resources

(1) Principle of human resources management:	<p>Management level oversight over project; in addition:</p> <ul style="list-style-type: none"> • Gender sensitive but competency and/or merit-based selection of counterpart staff (already competent or with good prospects of quick learning) • Assignment of technically competent personnel and juniors able to learn • Efficient and effective engagement of consultants and specialists outside of the government: all external experts to have a trainable counterpart • Sufficient staffing for field assessments and other tasks
(2) Required human resources in the public sector (Positions, grades and numbers):	<p>See Section 2.3(2):</p> <p>Long-term staff:</p> <ul style="list-style-type: none"> • Senior staff member as project manager, preferably with industrial management experience and exposure to informal enterprises • 3 activity leaders – one each for Components 1 to 3, with the one for Component 1 being short-term • Staff to suit Activities 1to10 • Administrative support team
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Paid consultants and/or short-term teams: focused short-term external experts may be needed for data and/or information design and design of market development and/or promotion strategy</p> <ul style="list-style-type: none"> • To suit Activities 1to10 <p>Volunteers from industry associations:</p> <ul style="list-style-type: none"> • Those selected for “training of trainers” in charcoal efficiency improvement (Activity 7) • 6 Leaders (part-time) of organisations of traders at city fuelwood and/or charcoal and/or poles distribution depots and 3 at brick-making locations • Cooperation (a desk officer) at Chamber of Commerce, Industry and Agriculture

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	<table border="1"> <tr> <td>L</td> <td>L: Low</td> <td>M: Medium</td> <td>H: High</td> <td>(select an indicator from the list)</td> </tr> </table>	L	L: Low	M: Medium	H: High	(select an indicator from the list)
L	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	<ul style="list-style-type: none"> • A generally well-known set of activities to the entrepreneurs except for skill levels being low • Markets also generally large and reliable 					

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	<ul style="list-style-type: none"> • Keep the activity at small and medium scale to sustain participation by broader society and serve poverty reduction directly.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<ul style="list-style-type: none"> • Training, including integration into national apprenticeship scheme if any of charcoaling and fuelwood and/or charcoal-saving devices etc. • Promotion to private investors, in cooperation with Chamber of commerce, Industry and Agriculture
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03.07 Fuelwood and Charcoal Value Chains - sustainable production and efficiency improvement project (cont.)

SSP/USD = 4

Project duration	Phase 1		Phase 2		Phase 3		Phase 4		Total																			
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000	% to total	
3 Equity investments																												
4 Provision of loans																												
5 Social assistance/donation (Emergency)																												
Total (SSP '000)	645	596	4,498	1,697	3,573	3,303																						
Total (USD '000)	161	149	1,124	424	893	826																						
% to total	5%	4%	31%	12%	25%	23%																						

Public sector project
Routine work by government

Private sector project

Routine work by private sector

4.4.8 Development of industrial processing and manufacturing of timber products project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Forestry		
(2) Project name:	Development of industrial processing and manufacturing of timber products project		
(3) Project ID:	03.08 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2016/17	Ending FY: 2027/28	Duration (years): 12
(5) Total investment:	SSP 44,703,000	USD 11,176,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FO.SA4	Private sector projects and businesses	Table 2-3
(2) Government organisation:	07	MAF-FO	Directorate of Forestry	Table 2-6
(3) Activity types:	301	PS-PR	Private sector - production	Table 2-12
	302	PS-MF	Private sector - manufacturing	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	
	72	JG	Jonglei State	
	73	UT	Unity State	
	81	WA	Warrap State	
	82	NB	Northern Bahr el Ghazal State	
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	X
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	X
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>In the profile for the project on “<u>Market development and promotion for commercial forest products</u>”, summary information on wood-based products was communicated on indicative levels of production and consumption of forest products, with caveats about poor reliability of available data. Like most developing countries, South Sudan particularly lacks data on domestic trade, which must therefore be guesstimated from apparent consumption;¹³⁹ some estimation was also made from Eastern Africa average consumption rates in the FAO international database.</p> <p>South Sudan has special attributes, among which an important one is the pent-up demand for timber products which years of conflict have created: unmet needs for housing, for construction, for rehabilitation of damaged structures. Besides, subject to the oil economy being reactivated, the country has considerable purchasing power both for finished timber products (furniture etc) and building. It is to meet such likely high growth that the processing capacity for basic wood products must be rehabilitated and expanded.</p> <p>Available information mentions as especially significant the sawmilling (and kiln-drying) of plantation teak, much of it directed at exports. There is less information on sawmilling of indigenous timbers, which one expects to take place in the south and south-west. There is no mention of veneer/plywood manufacturing, which technically uses logs that can be much bigger than for sawmilling. Yet plywood appears to be a significant share of panel products consumed; plywood would technically be the easiest panel product type to manufacture locally and the least costly to invest in.</p> <p>Further processing beyond basic lumber and panels (e.g. secondary conversion to furniture) is not really a “forest industry” but both sawmills and plywood factories could easily include furniture components alongside their primary production. The problem is that in a developing country like South Sudan, furniture is rarely sold in standard designs that can use pre-made components for serial assembly.</p>
(2) Objectives:	<ul style="list-style-type: none"> • To develop a nationally coherent plan for growth of the timber-processing industry for implementation at that level and at state levels, focusing on states where raw material availability is best. • To promote investment in rehabilitation of existing industry, evolution of new medium and large-scale processing enterprises, with likely focus on sawmilling and veneer/plywood, based mainly on old-growth planted teak and on indigenous forests. • To upgrade skills at existing mills and develop additional national capacity to operate an efficient timber industry.
(3) Overall description including temporal and spatial extent of project:	<p>For proper planning, the project requires information inputs from the market development project. Therefore it is proposed to start a year later, in 2016/17. It should run for 12 years after which it can be largely left to the private sector, with government undertaking its regulatory oversight and broad promotion from own resources. At both national and state levels, elements of the project are planning and prioritisation; promotions; and capacity building, as reflected in the components in Section 2.2.</p> <p>Types of Industry: Based on the partial background in section 2.1 (1) above, the core mission of the project should be, with particular focus on sawmilling and veneer/plywood,¹⁴⁰ to rehabilitate and/or expand existing processing industries; to promote development of new ones of medium scale to serve the domestic market, based on relatively limited raw material availability in each catchment; to plan for and have developed by the private sector, internationally competitive export mills based on groups of larger residual old-growth teak plantations. The sizing will be guided by the findings (to be adjusted over time) of the project on market development.</p> <p>In view of likely demand for rural electrification, production of power transmission poles could be taken over by processing mills. If straight teak poles are to be used, only drying would be required (termite resistant) but if blue gum poles are used, a pressure-treatment plant (creosote preferred) would have to be installed.¹⁴¹ Pole treatment plants could also exist independently of sawmills so as to be close to pole sources.</p> <p>Industry location and scale: It is the location of forest resources with raw material potential</p>

¹³⁹ Net apparent domestic consumption is estimated by adding imports to domestic production and subtracting exports.

¹⁴⁰ Development of *charcoal enterprises*, which are likely to collectively be the largest forest industry in South Sudan, is historically socially dispersed among numerous small-scale enterprises. It would be difficult to integrate the development of that industry with industrial processing for timber. For this reason, the charcoal industry is dealt with separately under project “Fuelwood and Charcoal Value Chains - sustainable production and efficiency improvement”.

¹⁴¹ For power-transmission poles, the recommended treatment is creosote under pressure. A common alternative is water-soluble copper-chrome-arsenic salts but human safety is at greater risk with arsenic-containing water-soluble chemicals than with oily creosote which is tarry and so obviously noxious.

Items	Information
	<p>that will determine geographical distribution of investment effort. Raw material availability is best in the three Equatorias and Western Bahr el Ghazal. The scale of mills in South Sudan will for a long time most probably not generate adequate waste to support capital-intensive integrated reconstituted-wood panel manufacture, such as particle/chip/flake or fibre boards. There is in any case only a small market for these products, for which it is more efficient to import. The following may also be noted:</p> <ul style="list-style-type: none"> • Processing of Planted Teak: Old-growth teak plantations may offer the greatest concentration of harvestable wood and should be prioritised. With reports that two existing relatively large mills are already able to take much raw material over a significant catchment, the temptation may be to grant industry licences for each of the remaining small individual teak plantations. Such an approach could constrain future establishment of larger-scale, internationally-competitive mills to make use of plantation efforts planned under CAMP project activities on commercial-scale forest plantations for log production on private land; forest plantations for log production in public forests; and community and smallholder timber plantations and on-farm tree-growing project. Planning should take into account that with proper road infrastructure, significant distances can in future be affordable for collecting logs to more central mills, given the relatively high value of teak. • An immediate area of opportunity is to add value to the teak “squares” that are reportedly being exported; “squares” are logs from which only thin slabs have been removed on four sides. It takes little investment to slice such squares (or cut the logs into quarters instead) into quality veneer and thus to make far more money than is being made now. When exporting squares, it is easy to be bullied by the customer into pricing at little more than for round logs and yet sliced veneer offers much more value added with relatively little extra effort.¹⁴² • Processing of Indigenous Timbers: For mills based on indigenous forests, South Sudan is at the margins of the closed Congo basin forest and therefore concentration of valuable trees will be more diluted – it could be less than 20 m³/ha at any one round of periodic harvest. Under such conditions, especially if good roads are scarce, careful analysis of the processing economics are essential: it will be primarily about the logistics of moving logs cost-effectively to central mills. If this is not done, an “option” often being exercised in Africa today is the wasteful entry of chainsaw “sawmills” which butcher the timber, waste much wood, and often operate clandestinely below the official radar. • Processing of power transmission poles: can either be linked to or separate from sawmills.
(4) Component structure:	<p>Component 1: Preliminary prioritization review of wood products and industries for selective large-scale promotion</p> <p>Component 2: National timber products processing and manufacturing promotion – focus private investment</p> <p>Component 3: State timber products processing and manufacturing promotion – focus private investment</p> <p>Component 4: Capacity building</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>As suggested in section 2.1(2), the project should focus on states where raw material availability is best. This would generally mean the three Equatorias and Western Bahr el Ghazal. Project implementation work should preferably be in cooperation with the ministry responsible for industry and with the Chamber of Commerce, Industry and Agriculture:</p> <p>Component 1: Preliminary prioritization review of wood products and industries for selective large-scale promotion</p> <p>Activity 1: Drawing upon the market review and inventory projects and building an industrial capacity status and utilisation review on it, confirm and adjust as necessary the recommendation (section 2.1(2)) that processing capacity focus on sawmilling and veneer/plywood. Prioritise mills for rehabilitation and propose phased new capacity development. For sawmills with export orientation, specifically assess adequacy of kiln capacity.</p> <p>Output: Status report and proposals for processing industry upgrading and expansion, specifying primary products to focus on and with firm recommendations on investment for mills of national significance and lower-level ones. Locations should be specified, indicating the raw material catchments that would serve the mills</p> <p>Activity 2: Design and activation of investment promotion by the project (pilots), development partners, and private sector. Specific campaign directed at investors already active in milling sector or who were there before (e.g. Commonwealth Development Corporation).</p> <p>Output: Promotional literature; in-country promotional events and study tours (4 events); For teak mills, 1 Eastern Africa promotional event in Nairobi and 1 in India</p>
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¹⁴² There is a clear opportunity here for trade oversight authorities to consider whether there is intent to defraud the country from its income by this practice. It is possible that taxation of such exports may be warranted to encourage investment into higher value-added veneer manufacturing.

Items	Information
	<p>Component 2: National timber products processing and manufacturing promotion – focus private investment</p> <p>Activity 3: Design and funding to implement, as a national level demonstration,¹⁴³ (a) one rehabilitation¹⁴⁴ activity, with a set of kilns added if not present; and (b) two new mills established based on teak and indigenous timber¹⁴⁵</p> <p>Outputs: (a) One operational rehabilitated pilot mill, (b) two pilot new sawmills based respectively on teak and on indigenous timber with access roads at same intensity as plantations project</p> <p>Missed Value-Addition Opportunity: The operation of demonstration sawmills will give first hand exposure to the phenomenon of South Sudan exporting its teak as large squares (i.e. logs with four slabs removed). At that stage, it is difficult to charge the decent price that sawnwood would attract and the temptation is to charge little more than for a raw round log. Yet with relatively little investment in a veneer slicer, the “square” is easily sliced into thin veneer that is even more valuable in the market than rotary veneer - especially as teak is a high-value species already.</p> <p>Activity 4: Design and funding to implement, as a national level demonstration, a power transmission pole treatment plant at one of the new mills. For demonstration effect, plant should not be based on termite-proof teak poles but on other species that can yield straight poles (eucalyptus a likely candidate).</p> <p>Outputs: Fully operational pole treatment plant with: pole drying and preparation yard (metal strapping and end-cleating, drilling etc.)</p> <p>Component 3: State timber products processing and manufacturing promotion – focus private investment</p> <p>Activity 5: At four locations, 1 in each of the forested states (East, Central and Western Equatoria; Western Bahr el Ghazal) technical assistance in re-design and equipping to rehabilitate at state level a sawmill based on teak or indigenous logs, with a set of kilns added if not present.¹⁴⁶</p> <p>Outputs: Four pilot rehabilitated sawmills based respectively on teak and on indigenous timber with some or most of the following depending on condition they are in: project technical assistance to cover hands-on training programme and advice on: access roads; harvest tracks; mill shed; kiln house and boiler; mill equipment and its layout; forest harvest equipment (tractors, chainsaws, log-transport trucks); drying and storage yard; maintenance; saw doctoring.. Equipment grant: complete drying kiln with boiler</p> <p>Component 4: Capacity building</p> <p>Activity 6: With full gender sensitivity, assess capacity needs (organisational and net training shortages) for the selected industries (sawmilling, plywood/veneer, transmission poles). Design hands-on and formal training including adaptation of technicians from general skills (such as fitting) to forest industry work.</p> <p>Outputs: Training programme ready for Activities 1 to 5</p> <p>Activity 7: Launch and pay for formal training. Training to include diploma level personnel and a few degree level as future managers for processing sector.</p> <p>Outputs: to be done at revision stage, looking at Activities 1 to 5: Training (all abroad) numbers: long-term - 2 diploma (2 years) in mill management; 1 certificate (6months) in harvesting; 3 certificate (6months) in saw doctoring (women are very good)</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<ul style="list-style-type: none"> • The Forestry Directorate’s Forest Industry Department (in cooperation with the Forest Economics and Programme Departments) the former on all aspects, the latter mainly on planning. • The Chamber of Commerce, Industry and Agriculture will be a key facilitator of getting private sector buy-in and participation; • The Ministry of Industry will be the licensing authority. • The Ministry of Labour is key to good recruitment and industrial training activities, including linkage to any national apprenticeship schemes.
(2) Description of beneficiaries	<ul style="list-style-type: none"> • Mill owners, who may also lease or own plantations nearby.

¹⁴³ Plywood mill not to be piloted but left to the private sector.

¹⁴⁴ A mill to rehabilitate can be located at any of the following places: Kalisoni in Magwi county, Katire in Ekotos county in EES, Loka group of saw mills in CES, Bahr al Gazal (Wau) saw mills, Yambio (Yabongo and Asanja and Nzara), Mapel in Lakes state.

¹⁴⁵ New mills can be located at Kagelu, Yambio, or Maridi. The assumed output capacity of 5,000 m³/year (about 16,700m³ input). The one based on teak would require about 170ha/year harvest @100m³/ha). The mill based on indigenous timber could require up to1,400ha/year harvest (if @ 12m³/ha). New mill and forest development to cover all needs from roads to mill structures and housing, assuming community facilities (schools etc) nearby.

¹⁴⁶ Depending on condition of mill, could need a lot of new or reconditioned equipment. Being private mills, project input, however, to be technical assistance, with new kiln-drying equipment an only exception as a demonstration of the value-adding nature of proper drying.

Items	Information
within the framework of the project:	<ul style="list-style-type: none"> • Beneficiaries of the project will especially be Government (especially the Ministry of Agriculture's Forestry Directorate but also the Ministry of Industry) who will gain primarily from capacity-building. • It will also be important to also assist appropriate units responsible for forest products in the Chamber of Commerce, Industry and Agriculture.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<ul style="list-style-type: none"> • Prioritised plan of investment into processing with specific investment opportunities being promoted • Operational pilot plants demonstrating rehabilitation and new greenfield site mills • Forest products in the market • Market for roundwood • Trade benefits
(2) EIRR and/or FIRR, and/or other economic analysis:	<ul style="list-style-type: none"> • At project finalisation stage and for each pilot investment

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: a</td> <td>Project:</td> </tr> <tr> <td>Positive: c</td> <td>a: is likely to have minimal or little impact on the environment and/or society</td> </tr> <tr> <td></td> <td>b: may have an impact on the environment and/or society</td> </tr> <tr> <td></td> <td>c: is likely to have a significant impact on the environment and/or society</td> </tr> <tr> <td></td> <td>d: will have a significant impact on the environment and/or society</td> </tr> </table>	Negative: a	Project:	Positive: c	a: is likely to have minimal or little impact on the environment and/or society		b: may have an impact on the environment and/or society		c: is likely to have a significant impact on the environment and/or society		d: will have a significant impact on the environment and/or society
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	b: may have an impact on the environment and/or society										
	c: is likely to have a significant impact on the environment and/or society										
	d: will have a significant impact on the environment and/or society										
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • If wastes not disposed of properly, could have localised environmental damage. <p>(Positive)</p> <ul style="list-style-type: none"> • High positive impact on society in providing opportunities to modernise: (a) skills introduced; (b) steady and modern employment and income brought near; and (c) electrification brought closer and some access roads. 										

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • Output of sawnwood, veneer/plywood, power transmission poles • Trade levels (quantities sold in domestic and external markets) • Rural employment • Market found for roundwood
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • Same as at the start, to allow comparison
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> • Baseline study; missions and consultant surveys.
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> • Directorate of Forestry's internal M&E; donor/Government periodic review missions

2.7 Required human resources

(1) Principle of human resources management:	<p>Management level oversight over project; in addition:</p> <ul style="list-style-type: none"> • Gender-sensitive but competency/merit-based selection of counterpart staff (already competent or with good prospects of quick learning) • Assignment of technically competent personnel and juniors able to learn • Efficient and effective engagement of consultants and specialists outside of the government: all external experts to have a trainable counterpart • Sufficient staffing for field assessments and other tasks
(2) Required human resources in the public sector (Positions, grades and numbers):	<p>See Section 2.3(2):</p> <p>Long-term staff:</p> <ul style="list-style-type: none"> • Senior staff member as project manager, preferably with industrial management experience • Staff to suit Activities 1-5 • Administrative support team
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Paid consultants/short-term teams: focused short-term external experts may be needed for data/information design and design of market development/promotion strategy</p> <ul style="list-style-type: none"> • Staff to suit Activities 1-5 • Contracts for roads, power connection etc • Contracts for promotional events/fairs to private sector investors <p>Volunteers from industry associations:</p> <ul style="list-style-type: none"> • Teak processing firms (preferably their association if it exists) • Value-chain players associations for selected priority products (e.g. if confirmed: sawnwood/timber, plywood) • Cooperation (a desk officer) at Chamber of Commerce, Industry and Agriculture

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk	M	L: Low	M: Medium	H: High	(select an indicator from the list)
(2) Explanation of expected risks	<ul style="list-style-type: none"> • Possible unclear property rights over forests if not government forests • Timeliness of connection to power: which may force purchase of independent 				

Items	Information
	generators

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	<ul style="list-style-type: none"> • Avoiding the temptation to cover too many commodities: focus on at most three – sawn timber; plywood/veneer; power poles.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<ul style="list-style-type: none"> • Training, including integration into national apprenticeship scheme if any etc • Promotion to private investors, in cooperation with Chamber of Commerce, Industry and Agriculture • Privatisation of pilot plants after 10 to 12 years of government operation
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**Attachment: Indicative Baseline Estimates of South Sudan
Apparent Consumption of Selected Wood Products**

The consumption estimates are derived from 2010 subregional per-capita consumption levels calculated from the FAOSTAT database for 12 Eastern Africa countries (Burundi, Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Rwanda, Seychelles, Somalia, Sudan, Tanzania and Uganda). The estimated population of South Sudan to prepare these estimates is **9 million people**.

These estimates offer a first line of validation if alternative estimates are very different from them; ground-truthing of data will lead to adjustments and to the estimated "consumption" being broken down into its elements, i.e.:

$$\text{Consumption} = (\text{Production} + \text{Imports}) - \text{Exports (ignoring stocks)}$$

Product	E. Africa per-capita	2010 Estimated Annual South Sudan Consumption		2010 Eastern Africa Consumption	
	(m ³) ¹⁴⁷	(m ³)	+/- % of S. Sudan total	m ³	+/- S. Sudan share (%)
Wood Fuel	0.781	7,020,000	80	239,158,292	3
Charcoal	0.040	360,000	4	9,525,272	4
Industrial Roundwood	0.104	936,000	11	14,998,558	6
Saw and Veneer Logs	0.028	252,000	3	4,040,227	6
Sawnwood (i.e. lumber)	0.005	45,000	0.5	677,400	7
Wood-Based Panels	0.0045	40,500	0.5	427,132	9
Paper and Paperboards (metric tons)	0.005 mt	45,000	-	1,011,368	4
Paper and Paperboards m ³ (roundwood equiv at 1mt=5m ³)	0.025	225,000	2	5,056,840	4
TOTAL, roundwood equivalent	-	8,878,500	100	273,883,721	3

¹⁴⁷ All volumes are in roundwood equivalent i.e. after taking account of wastage in processing.

03.08 Development of industrial processing and manufacturing of timber products project (cont.)

SSP/USD = 4

Project duration	Phase 1												Phase 2				Phase 3				Phase 4				Total		
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000	% to total
T total (SSP '000)	822	6,578	2,883	3,586	3,586	3,586	3,586	4,016	4,016	4,016	4,016	4,016	4,016	4,016	4,016	4,016	4,016	4,016	4,016	4,016	4,016	4,016	4,016	4,016	4,016	44,703	100%
T total (USD '000)	205	1,644	721	896	896	896	896	1,004	1,004	1,004	1,004	1,004	1,004	1,004	1,004	1,004	1,004	1,004	1,004	1,004	1,004	1,004	1,004	1,004	1,004	11,176	100%
% to total	2%	15%	6%	8%	8%	8%	8%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	100%	100%

Public sector project
Routine work by government
Private sector project
Routine work by private sector

4.4.9 Forest-based tourism development project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Forestry		
(2) Project name:	Forest-based tourism development project		
(3) Project ID:	0309	01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development	
(4) Start and ending fiscal year:	Starting FY: 2017/18	Ending FY: 2034/35	Duration (years): 18
(5) Total investment:	SSP 19,951,000	USD 4,988,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FO.SA8	Management for non-consumptive economic utilisation of forest biodiversity and scenic resources by public and private sectors	Table 2-3
(2) Government organisation:	07	MAF-FO	Directorate of Forestry	Table 2-6
(3) Activity types:	208	SP-PO	Service delivery and Infrastructure development - economic infrastructure development (tourism)	Table 2-12
	999	OTR	Other: private sector tourism	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	
	72	JG	Jonglei State	
	73	UT	Unity State	
	81	WA	Warrap State	
	82	NB	Northern Bahr el Ghazal State	
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
93	EE	Eastern Equatoria State	X	
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	X
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	X
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income	X	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>This project, which aims at capturing economic opportunities through non-consumptive use of forests, takes the Forestry Directorate into new territory and is therefore an example of efforts at agricultural transformation. Responsibility for it should normally be the province of the tourism ministry but the resource is in the forestry sector. It is important that the parent ministry (agriculture) of this resource be closely engaged in championing sustainable utilisation of what forests have to offer and in advocating public enjoyment of this natural endowment.</p> <p>Forestry literature is awash with claims of high “economic” values of forests – figures are often published that are much higher than the financial returns obtainable from harvesting wood or non-wood commodities. Those involved in analysing the “full value” of forests attach large importance to their environmental worth (such as watershed protection, biodiversity, scenic beauty etc.) of the forest. They generally claim that these values can, with proper investment, be partly transformed into financial flows. This project is one example of how to do that in the South Sudan context.</p> <p>In brief, the intention is to, by example, initiate expansion of tourist activities in scenic forest areas which also have other attractive attributes: scenery and biological resources, both plant and animal. The project would invest in simple rural roads, in simple but attractive visitor accommodation, in tourist-support services (guides etc) to entice mostly city-dwellers to come into contact with nature. Ideally (and maximum efforts should be made in this direction) the investment should from the start get private sector partners. However, in remote locations, there may be need for government to initially play an incubation role; go it alone and show that it can work, and then the private sector will come in.</p> <p>Such an engagement offers an opportunity to draw attention to a potential growth sector, often in the deep countryside where alternative employment is scarce. It is an activity that, apart from offering temporary employment at construction stage (bush tracks, lodges/forest rest houses) leaves in place permanent employment for guides, drivers, cooks, laundry service, cleaners etc. And after all this, the forest remains pristine and in place, unlike in wood-processing industries. Apart from the local employment just mentioned, there are several other justifications for taking on this area of investment:</p> <ul style="list-style-type: none"> • in a country where rural access is particularly difficult, development of rural roads to remote localities gives opportunities well beyond the business development – it opens up rural space for inhabitants to link with the modern economy; • making money from non-consumptive tourism is a demonstration that it is not necessary to destroy the environment to make a living from it; this is one way to promote public support for conservation; • growing preoccupation with climate change attaches great importance to saving vegetation as a carbon store: non-consumptive use of forests is one way of ensuring this while also getting immediate financial benefits; and • where the forest or woodland also has wildlife, keeping wild animals for game viewing and occasional auctions can be among the most profitable land uses, as revealed recently by reports from South Africa.¹⁴⁸ <p>In promoting investment to tourism and hospitality investors, the South Sudan government sells the attractiveness of “nature”. But as of now, the post-war recovery of tourism activity is still nascent: according to a recent document, Nimule National Park (one of the most frequented, being on main route to Uganda) gets monthly revenue of only US\$7,000, mostly from foreigners. At the other end of the scale, however, Al Ain Wildlife of the UAE has secured a 30-year hospitality concession over the entire 2.3 million ha Boma National Park (Eastern Equatoria/Jonglei) to develop all structures and tourist services; this development has now unfortunately been interrupted by renewed conflict.</p> <p>This project offers a chance for forests to contribute directly to tourism, not with the grandeur of the Al Ain concession in Boma, but at a scale which South Sudanese national investors can also aspire to taking up.</p>
(2) Objectives:	<ul style="list-style-type: none"> • To promote growth of tourism as a means to rural economic opportunities. • To this end, to quickly establish simple forest access roads and tracks. • To use information gathered and experience of managing a tourism operation to design and implement market promotional efforts for forest – based tourism which can then bear fruit under a second Phase of the project.

¹⁴⁸ “South African game breeders rake in big bucks.” by Stephanie FINDLAY. According to one farmer, “This industry has performed exceptionally well, better than the stock market.” The rise of the industry is a result of South African legislation giving a private landowner total control over his animals.” <http://www.fin24.com/Economy/Ramaphosa-Game-farmers-create-jobs-20140908>

Items	Information										
(3) Overall description including temporal and spatial extent of project:	<p>• To build capacity for all the above.</p> <p>The project is proposed for two phases: Phase I (five years from 2017/18 to 2024/25) - would pilot engagement in tourism, including incubation of hospitality activities by the forest directorate. Lessons from this would lead to a consolidation and upscaling under a ten-year Phase II (2025/26 to 2034/35) which would still have government engagement but would hand over completely to the private sector in 2036/37 and at the same time promote additional private investments.</p> <p>The locations selected for project intervention could be from among the tabulated list. The tourist activities of the project could be sold as part-package with the already established and publicised attraction of tourism to the Boma-Bandingilo animal migration. But the places selected should be independently attractive because of their outstanding natural beauty and/or biological richness which ideally could include charismatic wildlife/birdlife/plant formations that tourists would be interested in. It is a balancing act to choose locations for their attractiveness but also have them near enough to main centres where “consumers” live – the urban areas.</p> <table border="1"> <thead> <tr> <th>Type of environment</th> <th>Forest Location</th> </tr> </thead> <tbody> <tr> <td>Wilderness</td> <td>For experience of solitude in the highly under-populated shrub land stretches of Western Bahr el Ghazal (only 3.6 people/km²)</td> </tr> <tr> <td>High altitude/solitude</td> <td>The Imatong mountains mosaic is a forest wild life based watershed with rich biodiversity. Its attractions include the highest peak Kineti mountain, 4 waterfalls and temperate climate. At Gilo and Chakwe on the way to Kineti, a guest house can be established.</td> </tr> <tr> <td>Riverine sites</td> <td>Upper Nile, farther from the more frequented stretches near Juba. Can probably combine with kayaking/rafting on river rapids. There is a safari camp at Badingilo near Mangala with animals including bush bucks. They are accessible with a small guest house.</td> </tr> <tr> <td>Rain Forest margin</td> <td>DRC border of Western Equatoria and Central Equatoria in Morobo (Okeyo plateau and the Morobo falls). Lainya-Wonduruba has hot springs.</td> </tr> </tbody> </table> <p>To place it all in context of existing activity: the top nature tourism attraction to South Sudan is the annual migration of nearly a million white-eared cob between Boma and Bandingilo national parks, a phenomenon said to rival the Ngorongoro Crater/Serengeti gnu/wildebeest migration in Tanzania/Kenya; it occurs in an area of shrubs and grass. This migration occurs in part of a 200,000 square kilometre Boma-Jonglei landscape which the Wildlife Conservation Society considers to be perhaps the largest unspoilt habitat in eastern Africa. Most of the nature tourism being operated by a few companies builds around this animal migration and hardly any other imaginative development of forest destinations is reported.</p> <p>The current narrow focus of existing South Sudan tour operators on a single attraction draws attention to the challenge of narrowness faced elsewhere in the region. In the case of Uganda, government agencies tend to let concessionaires invest in lodges and/or hospitality infrastructure provided their designs are conservation-friendly, blend with nature and comply with other environmental and/or aesthetic considerations. On other aspects it appears that the following are among areas of weakness in managing forest-based tourism, which South Sudan will need to anticipate in seeking solutions:</p> <ul style="list-style-type: none"> • Institutional separation and failure to effectively and share costs in managing the similar ecosystems which the Forest Authority and the Wildlife Authority manage; • In promoting tourist interest, excessive focus by each on the resource they know best (forests for the Forest Authority and wildlife by the Wildlife authority) each of them paying inadequate attention to attractions of a historical, cultural and scenic nature etc.); • Failure to attract nationals into domestic tourism so that the visitor arrivals are inordinately dependent on foreigners and their seasonal preferences; and • Poor definition of how best to make local communities benefit: cash is directly made by air transporters, tour operators, hotels but for the locals, no clarity even though they host the resources and sometimes suffer conflicts with the wildlife. <p>Phase I: Component 1: Identification and prioritization of prime forest locations (aesthetic, wildlife, cultural etc.) for potential hospitality investments Component 2: Publicity and commercial promotion Component 3: Training and other capacity development for non-consumptive utilisation of forests</p> <p>Phase II: Component 4: Based on Phase I lessons of piloting, prioritization of prime locations (aesthetic, wildlife, cultural etc.) for larger-scale hospitality investments Component 5: Upgrading of critical forest access roads and in-forest tourist tracks (public investment: collaborative national/state budgets and DP inputs) Component 6: Incentive-driven private tourist lodges development in selected areas of</p>	Type of environment	Forest Location	Wilderness	For experience of solitude in the highly under-populated shrub land stretches of Western Bahr el Ghazal (only 3.6 people/km ²)	High altitude/solitude	The Imatong mountains mosaic is a forest wild life based watershed with rich biodiversity. 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(4) Component structure:											

Items	Information
	<p>outstanding natural beauty or biological riches</p> <p>Component 7: Support to private-sector-driven publicity and commercial promotion (e.g. taxation-based promotion of local tourism; facilitate collaborative promotion in Eastern Africa, Near East etc.)</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs

<p>Work should preferably be in cooperation with ministry responsible for tourism and with the Tourism and Hospitality Chamber for South Sudan (THCSS) which replaced the Hotels and Catering Association in 2013:</p> <p>Component 1: Identification and prioritization of prime forest locations (aesthetic, wildlife, cultural etc.) for potential hospitality investments – critical to design for private sector to eventually dominate.</p> <p>Activity 1: Overall review of the state of tourism in the country and the “nature-tourism” part of it – trends, prospects, drivers of demand, key hurdles and efforts to address. Output: Report</p> <p>Activity 2: Based on study at Activity 1, shortlist possible locations for project activity which can best demonstrate what is possible. Ideally do one site first before attempting another, if any. Prioritise the sites, consult key stakeholders and decide. Output: Report with recommendations for policy decision</p> <p>Activity 3: Design project including priority infrastructure development (especially access roads and/or forest tracks) and lodges and/or rest houses Output: Project workplan</p> <p>Activity 4: Construction of facilities and launch of hospitality activities Output: Rehabilitated and new hospitality infrastructure and environmental awareness dormitories</p> <p>Component 2: Publicity and commercial promotion (focus private sector but public pilots/incubation welcome)</p> <p>Activity 5: Piloting and incubation activity in operating the hospitality facility and forest tours, including educational tours (schools, environmental groups). Partnership with environmental advocacy NGOs could be crucial. Output: Publicity and promotional activity</p> <p>Activity 6: Networking: (a) general domestic links, activity sharing and tour packages development within the THCSS; (b) specific domestic links with tour operators or enterprises like the Al Ain Wildlife concession; and (c) Regional networking and development of multi-country tour packages. Output: Jointly with Activity 5: Contract for promotional events and materials</p> <p>Activity 7: Sponsoring forest sector participation at fairs and/or events where overall South Sudan tourism is showcased, domestic and regional (Eastern Africa, Near East) Output: South Sudan presence; lump sum</p> <p>Component 3: Training and other capacity development for non-consumptive utilisation of forests</p> <p>Activity 8: Identify critical capacity and organisational improvements in training: (a) Assess the training of South Sudanese already started mainly in Kenya and under a UNDP/WCS collaborative project; determine priority remaining needs; (b) study the operations of members and non-members of the THCSS and propose best links within the system for optimum business growth for forest tourism; (c) develop a specific programme of group-tour based awareness training in the field for schools, environmental NGOs and other special-interest groups. Output: Consultant report for items (a) and (b); Subcontract to a firm for (c)- lump sum</p> <p>Activity 9: Implement capacity-building activities. Trained numbers: on the job attachments in Kenya (6 months, 10 people) Diploma in ecotourism and hospitality (Kenya, 18months- 2 years: 5 people) 20 Working staff (guides, guards, tour drivers, waiters and room servants and/or cleaners etc.) Language - conversation training for 6 guides and drivers Output: Set of capacity building events, mostly under contract.</p> <p>Phase II - activity details under each component (listed below) to be formulated by Phase I project under the following components below. In the initial listing of projects stage, specialised focus areas are to be taken. Examples of such development opportunities included (a) Nile River Safaris associated with managed riverine forests, and (b) Greenbelt Safaris development (could have trans-frontier elements with DRC and CAR)</p> <p>Rigorous market analysis should precede any decisions on Phase II engagement which should combine consolidation of Phase I successes and further expansion, preparation for handover to the private sector and promotion of related private or public/private</p>
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Items	Information
	<p>investments.</p> <p>Component 4: Based on Phase I lessons of piloting, prioritization of prime locations (aesthetic, wildlife, cultural etc.) for larger-scale hospitality investments).</p> <p>Component 5: Upgrading of critical forest access roads and in-forest tourist tracks (public investment: collaborative national/state budgets and DP inputs)</p> <p>Component 6: Incentive-driven private tourist lodges development in selected areas of outstanding natural beauty or biological riches</p> <p>Component 7: Support to private-sector-driven publicity and commercial promotion (e.g. taxation-based promotion of local tourism; facilitate collaborative promotion in Eastern Africa, Near East etc.)</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<ul style="list-style-type: none"> • The Afforestation and Natural Forest Conservation Department of the Forestry Directorate and Ministry for Tourism will be the key service providers, working jointly. • The THCSS should be closely associated.
(2) Description of beneficiaries within the framework of the project:	<ul style="list-style-type: none"> • Local forest communities in selected tourism development areas will be prime beneficiaries from employment and skills • Beneficiaries of the project will especially be Government (especially the Ministry of Agriculture's Forestry Directorate) but also the Ministry of Tourism will gain primarily from capacity-building. • It is important to also assist appropriate units responsible for forest-based tourism in the THCSS.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<ul style="list-style-type: none"> • Rural employment and income • Greater environmental awareness • Expansion of private sector investment opportunities at a scale within reach of South Sudanese entrepreneurs
(2) EIRR and/or FIRR, and/or other economic analysis:	<ul style="list-style-type: none"> • Important; do at detailed project preparation

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: a Positive: c</td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: a Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: a Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Positive)</p> <ul style="list-style-type: none"> • Impact on environment is benign and entirely positive in that the forest remains intact. • Positive also in contributing to environmental awareness in the country. • Social gains from local employment and income and at times also from conservation of culturally important forests. 		

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • Visitor arrival levels (tracking separately indigenous domestic, foreign residents, and external arrivals) • Repeat visit frequency levels (indicator of visitor satisfaction) • Content of visitor feedback • State of the forest and of its key attractive attribute
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • Same as at the start, to allow comparison
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> • Baseline study; missions and consultant surveys.
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> • Partnership of Forestry Directorate/ Ministry of Tourism/ THCSS • Donor/Government periodic review missions, including towards end of Phase I

2.7 Required human resources

(1) Principle of human resources management:	<p>Management level oversight over project; in addition:</p> <ul style="list-style-type: none"> • Gender sensitive but competency and/or merit-based selection of counterpart staff (already competent or with good prospects of quick learning) • Assignment of technically competent personnel and juniors able to learn • Efficient and effective engagement of consultants and specialists outside of the government: all external experts to have a trainable counterpart • Sufficient staffing for field work and other tasks
(2) Required human resources in the public sector (Positions, grades and numbers):	<p>See section 2.3(2):</p> <p>Long-term staff:</p>

Items	Information
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<ul style="list-style-type: none"> • Senior staff member as project manager (preferably with some private-sector exposure) • Administrative support team • Field construction supervisor • Market “promoter” <p>Paid consultants/short-term teams: focused short-term external experts may be needed for conceptualisation, design and design of market promotion strategy</p> <ul style="list-style-type: none"> • Teams of local consultants and enumerators • Contract event organisers for promotional events and/or fairs <p>Volunteer:</p> <ul style="list-style-type: none"> • None specific but associations should cooperate – could be under the THCSS

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px 10px;">M</td> <td style="padding: 2px 10px;">L: Low</td> <td style="padding: 2px 10px;">M: Medium</td> <td style="padding: 2px 10px;">H: High</td> <td style="padding: 2px 10px;">(select an indicator from the list)</td> </tr> </table>	M	L: Low	M: Medium	H: High	(select an indicator from the list)
M	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	<ul style="list-style-type: none"> • A new area of enterprise where limited knowledge poses some challenges 					

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	<p>Avoiding the temptation to cover more than two locations initially: need to focus.</p> <p>Other considerations relevant to the project could include</p> <ul style="list-style-type: none"> • It is a new area for the Forestry Directorate: a willingness to learn and externally cooperate with other organisations will be critically important • In the latter part of Phase I, the private sector must be given lead roles in the promotional efforts • The Tourism and Hospitality Chamber for South Sudan (THCSS) could be a key partner.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<ul style="list-style-type: none"> • Information-dissemination products: newsletters, papers, publications etc • Group environmental awareness activity • Private sector (especially Tourism and Hospitality Chamber for South Sudan) which can take over promotional work • The human resources under 2.8 (2) can organise and hire in temporary additional capacity as needed
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4.4.10 Integrated upscaling of industrial and outgrower tree plantations and expansion of wood processing for export project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector: Forestry
(2) Project name: Integrated upscaling of industrial and outgrower tree plantations and expansion of wood processing for export project

(3) Project ID: 0 | 3 | . | 1 | 0 | 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development

(4) Start and ending fiscal year: Starting FY: 2025/26 Ending FY: 2037/38 Duration (years): 13

(5) Total investment: SSP 18,849,000 USD 4,712,000 Note: Not including recurrent cost

1.2 Project characteristics

(1) Subsector area:

Code	Abbreviation	Description	Reference	
	FO.SA4	Private sector investment and development project	Table 2-3	
(2) Government organisation:	07	MAF-FO	Directorate of Forestry	Table 2-6
(3) Activity types:	104	ID-IM	Institutional Development – implementation and monitoring	Table 2-12
	301/2	PS-PR/MF	Private sector – production/manufacturing	Table 2-12

1.3 Project characteristics

(1) Development theme:

Code	Abbreviation	Description	Selection
01	RR	Reconstruction and recovery	
02	FS	Food and nutrition security	
03	EG	Economic growth and livelihood improvement	
04	AT	Agriculture sector transformation	X
05	ID	Institutional development	

(2) CAADP Pillars:

01	CAADP-P1	Pillar 1: Land and water management	
02	CAADP-P2	Pillar 2: Market access	X
03	CAADP-P3	Pillar 3: Food supply and hunger	
04	CAADP-P4	Pillar 4: Agricultural research	

(3) State:

71	UN	Upper Nile State	
72	JG	Jonglei State	
73	UT	Unity State	
81	WA	Warrap State	
82	NB	Northern Bahr el Ghazal State	
83	WB	Western Bahr el Ghazal State	X
84	LK	Lakes State	
91	WE	Western Equatoria State	X
92	CE	Central Equatoria State	X
93	EE	Eastern Equatoria State	X

(4) Objective time horizon:

01	ST	Short-term (less than 5 years)	
02	MT	Medium-term (5 to 10 years)	
03	LT	Long-term (more than 10 years)	X

(5) Planning time horizon (start):

01	PH1	Phase I (2015/16-2019/20, 5 years)	
02	PH2	Phase II (2020/21-2024/25, 5 years)	
03	PH3	Phase III (2025/26-2029/30, 5 years)	
04	PH4	Phase IV (2030/31-2039/40, 10 years)	X

(6) Livelihood Zone:

01	EFP	Eastern Flood Plains	
02	GBT	Greenbelt	X
03	HAM	Hills and Mountains	X
04	ISP	Ironstone Plateau	X
05	NSR	Nile-Sobat Rivers	
06	PTL	Pastoral	
07	WFP	Western Flood Plains	

(7) Ownership:

01	NP	National project	X
02	NS	National-State project	
03	SP	State project	
04	SC	State-County project	
05	PP	Public-Private Partnership project	
06	PS	Private sector project	

(8) Funding sources:

11	NBF	National government budget/development fund	X
12	NLE	National government loans and equity financing	X
21	SBF	State government budget/development fund	
22	SLE	State government loans and equity financing	
31	DPG	Development partners grant	X
32	DPL	Development partners loans and equity financing	X
41	PSI	Private sector Investment	X
51	NGG	NGO grant	
52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income	X

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

The project write-ups for the Phase I projects on plantations and on wood processing industry development which are to be unified and jointly up-scaled under this project gave the underlying justifications for the interventions. These need not be repeated for this Phase II extension and upscaling.

Suffice it to say that by the time Phase II is contemplated (i.e. preferably 10 rather than 5 years later) field progress will have been made, based on any preparatory studies done during that earlier phase. The government-planted trees will have reached a size than can interest the private sector entities and convince the serious among them that it may take long but not forever to get a return from opportunities in forestry. The policies (such as incentives for plantations) and institutional enablers will have been put in place both for large-scale plantations and for participatory resource-creation by communities and individual smallholders. Many lessons will have been learned about the most difficult early part of any tree plantation enterprise and it will be time to build on such experience.

The baseline estimates of South Sudanese wood products consumption used in project profile preparation are as reproduced below:

Timber Product	Volume of Demand roundwood equivalent (m ³)
Saw and veneer logs	315,000
Sawnwood	56,300
Plywood	40,500
Total	411,800

By the end of Phase I projects, further analysis will have revised these estimates and updated information will have informed projection of future demand growth. But “adequacy” of timber supplies is not enough; by phase II, South Sudan should show greater ambition: to do this, it should accept that the future will need larger-scale and therefore internationally more-competitive mill investments so that its trade can look outwards. It is proposed that 2 to 3 large sawmills be planned for, with each to have an expanded raw material catchment from both commercial-scale government and private plantings and to buy in from smallholder communities within each catchment. It will be essential to confirm that the forest resource base can support such investments. It should also be ensured that tree planting continues.

The mindset of planners and decision-makers will need to grow beyond “small and cosy” investments to competitive industries that can face the world market and be confident of meeting global criteria of quality; reliability (quantity, quality and timeliness of delivery); environmental soundness (sustainable management criteria, product traceability, compliance with emerging “green economy” standards); and credibility when they apply for carbon-capture benefits.

South Sudan will face a competitive world and despite being the newest among developing countries should expect no sympathy or favoured treatment in that market. It will not do to plead weaknesses and newness of the country: the products should stand up for themselves in the market. For this, South Sudan must have ambition to be among the best. The upscaling and upgrading of Phase II is designed to permit this.

(2) Objectives:

- To initiate development of an upscaled integrated modern sawmilling industry based on commercial and smallholder plantations, the initial capacity to be in 2 to 3 mills. Location would almost inevitably be in the Equatorias, with Western Bahr el Ghazal perhaps also possible.
- To aim for quality production largely destined for the export market.
- To create large-enough raw material catchments for each mill’s raw material supply security.
- To achieve greater value-chain integration from forest to final product and between large and small raw material suppliers.
- To sustain in-country capacity-building efforts (public and private) under the second phase

(3) Overall description including temporal and spatial extent of project:

It will take about 10 years for the first stage of most projects to reach steady state. By that time (2025/26) it will be time to upscale and integrate resource-creation with processing into a more unified value-chain. After 10 years (but preferably 15 years) of lesson learning, it will also be possible to integrate better the industrial plantation activity with the small-scale participatory one such as through outgrower / subcontracting arrangements. The integrated project would run for 13 years, till 2037/38 and progressive privatisation or

Items	Information
	<p>conversion to Public-Private Partnerships (PPP) would be feasible. The Box highlights the convergence and Upscaling elements of the change from Phase I:</p> <p>The integration and upscaling would build on the achievements of the following projects from the first phase: “<u>Industrial-Scale Forest Plantations development for log production</u>”; “<u>Community forestry, agroforestry and smallholder plantations development</u>”; and “<u>Development of industrial processing and manufacturing timber products</u>”. The main elements of change from Phase I projects would be as follows:</p> <ul style="list-style-type: none"> • Upscaling the scale of operations in both plantations/concessions and processing entities; • Focus goes to two or three large-scale processing enterprises capable of competing with the best in export markets in prices, quality, compliance with certification requirements, product traceability and probably any new demands for “green-economy” compliance; • Vertical integration of enterprises backwards from processing to resource management and forwards to markets; • Expanded raw material catchments for each mill, so stabilising sources even when some compartments due for harvest prove difficult to access (e.g. due to impassable roads); • Better interfacing in raw material supplies between commercial-scale plantations and concessions with smallholder operations: the 10-15 year experience should have identified models (could be properly-enforced and fair outgrower schemes). <p>The essence of the integrated and upscaled follow-up phase will be to orient towards quality exports based on sustainably-managed plantations, the yield of which is more predictable and higher per unit area than for natural forests. The follow-up phase also aims at the benefits of scale; to establish processing mills for larger raw-material catchments; to establish win-win partnerships between central plantations and community/smallholder outgrowers; and to link processing activity (initially sawn timber, later also veneer/plywood) as large log availability increases.</p> <p>Absolutely essential will be to guarantee quality, including by 100% kiln-drying of sawnwood; also to satisfy the preoccupations of the international market for compliance with key environmental concerns (including climate change) and for product traceability to wood sources that can be certified for environmental soundness.</p> <p>In the project profiles for Phase I, it was stated that if we adopt the CAMP Situation Analysis reports of 36,548ha for existing teak forests, then the net additional planting would have to be between 9,000ha (at 30m³/ha/year) and 36,000ha (at 20m³/ha/year) to meet total internal demand. However, it was also stated that available in-country productivity information¹⁴⁹ gives a merchantable logs yield for teak plantations of between 100 and 286m³/ha at final harvest (silent on yields at thinning stages). If we assume a 30-year rotation, these figures would equal only 3.3 – 9.5m³/ha annual increment. Accordingly, a far larger annual planting area than speculated earlier would be needed.</p> <p>South Sudan cannot allow itself to risk facing a time when existing supplies of industrial wood have nearly disappeared and new ones are not yet mature enough to harvest. For this reason, the project on government plantations for logs was planned to already start by 2017/18. By the time of starting Phase II (about a third to half a softwood rotation later) enough will have been learned about average feasible annual yield to have influenced decisions on planting targets.</p>
(4) Component structure:	<p>Sub-Project 1: Forest Plantations for Log Production</p> <p>Component 1: Privatisation or Conversion to PPP and Expansion of Industrial-scale Government Plantations on public land</p> <p>Component 2: Expansion of Private Sector Commercial Plantations Development on Private Land</p> <p>Component 3: Expansion and Integration of Outgrower Schemes and Other Non-Industrial Scale Smallholder Log Production Activities With Commercial Plantations</p> <p>Sub-Project 2: Development of Large-Scale Industrial Processing of Timber Products</p> <p>Component 4: Upgrading of sawmilling capacity for exports</p> <p>Component 5: Upgrading of Wood-Based Panel Products Industry</p> <p>Sub-Project 3: Capacity-Building Programme Integrated Forest Plantations and Forest Products Processing</p> <p>Component 6: Capacity assessment and capacity building</p>

¹⁴⁹ All sources are silent on yield levels for natural forests and woodlands and give estimates only for teak plantations. (a) “Forest Management Plan”. Equatorial Teak Company, 08 May 2012. (b) “Forest Inventory Report: Kagelu Forest Reserve, Yei River County (9 June 2010)” (c) “Forest Inventory Report: Nyin-Akok Forest Reserve, Jur River County (March 2012)”. Land Survey and Information Centre, Norwegian Forestry Group, Forest Sector Programme for South Sudan 2007-11

Items	Information
<p>2.2 Detailed description of project component, activity and outputs (1) Component, activity and outputs:</p>	<p>The utility of going into “Activity-level” details for an upscaling effort that is at this time more than 20 years ahead is questionable. For this reason, only indicative activities are listed here but no attempt is made to quantify the cost of either investment or operations at this stage. It is recommended that this be done not less than 5 years into the implementation of the three projects that will be federated here, i.e.: <u>“Industrial-Scale Forest Plantations development for log production”</u>; <u>“Development of community and smallholder timber plantations and on-farm tree-growing”</u>; and <u>“Timber products processing and manufacturing”</u>.</p> <p>Sub-Project 1: Forest Plantations for Log Production Component 1: Privatisation or Conversion to PPP and Expansion of Industrial-scale Government Plantations on public land Activity 1: Confirm and update (in cooperation with market development project) a comprehensive study giving forecasts of future demand of sawnwood and panel products and determine amount of afforestation needed to meet identified gaps and a strategy for covering the needs. Propose pace and sequencing of privatisation or conversion to PPP of government forest plantations. Activity 2: Undertake full feasibility studies for finalisation of government forest plantations on public land to full size originally intended (30,000 ha at 1000ha/year) including implementation of the plantation programme, construction of roads/tracks, offices, housing etc. Build into privatisation/PPP prospectus and launch for bids, select and award.</p> <p>Component 2: Expansion of Private Sector Commercial Plantations Development on Private Land Activity 3: Select for priority technical support and oversight commercial private plantations close to locations of government plantations under privatisation/PPP conversion [nearness is critical for low-cost raw material delivery to mills] Activity 4: Confirm and refine affordable incentives for private sector plantation investment (in keeping with expected returns to investment) from Phase I and continue their implementation on the larger scale. Undertake periodic review of effectiveness and efficiency of beneficiaries of incentives and proposals for adjustments (if any) to support measures or incentive packages. Activity 5: Expand technical support (including research backstopping) to private commercial-scale forest plantation and log production, taking into account privatisation/conversion to PPP of former government plantations. Activity 6: Establish and apply oversight procedures for private sector plantations, including efficacy in applying best practice for productivity, modern environmental measures, compliance with sustainability requirements and with industry codes of practice etc (can be joint with industry organisations)</p> <p>Component 3: Expansion and Integration of Outgrower Schemes and Other Non-Industrial Scale Smallholder Log Production Activities With Commercial Plantations Activity 7: Support to non-industrial scale tree planting for the wood processing sector: extraction of best practice from Phase I for implementation of non-industrial scale tree planting to produce for the wood processing sector, prioritization of locations close to main blocks of industrial-scale plantations (and within catchment of the large new mills) for expansion of smallholder tree growing and planning of the upscaling; and promotion of outgrower schemes and other non-industrial scale smallholder log production in the selected locations. Activity 8: Upscale promotion of outgrower schemes and other non-industrial scale smallholder log production, including by: refining incentives and log-production grants; securing more fair and reliable market agreements with the mills giving “win-win” rather than exploitative “captive market” situations; brokering negotiations for more fair partnership agreements e.g. for outgrower schemes between industrial-scale and smallholder tree growers; boosting capacity of State government extension support; and oversight of implementation of community level afforestation and farmland tree-growing (outgrowers, household woodlots, linear tree planting etc) Activity 9: Assist organizations of smallholders for log production, log marketing and for eventual local community participation in smallholder processing industry (starting with processing of sub-grade logs not meeting specifications of large mills). Support should sustain and focus more on entrepreneurship. This would facilitate more structured and formal partnerships between community smallholder tree planters, the large commercial plantations and the mills. Activity 10: Explore feasibility and procedures for local-community share-holding in</p>

Items	Information
	<p>nearby industrial plantations and eventually also in the processing plants.</p> <p>Activity 11: To avoid abuse of smallholder raw material suppliers facing a “captive market” situation (only one large mill in neighbourhood is the market) and abusive relations also with large-scale partner plantations, consider having an “ombudsman”.</p> <p>Sub-Project 2: Development of Large-Scale Industrial Processing of Timber Products Ambition: Develop 2 to 3 new large sawmills (for 100% kiln-dried wood, further processed into machined wood, packaging, furniture and building components); add integrated plywood/veneer mills¹⁵⁰. Ensure adequate raw material catchment for each from both commercial and smallholder log sources.</p> <p>Component 4: Upgrading of sawmilling capacity for exports. Giving preference to Greenfield site developments but without dogmatic exclusion of existing-mill upgrades: Activity 12: Carry out preliminary prioritization review of wood products for selective large-scale promotion Activity 13: Prioritise policy support for establishment of 2 to 3 large sawmills with 100% kiln-drying capacity integrated with machined timber, packaging, furniture and building components as market allows. Activity 14: Prepare pre-feasibility studies of the prospective large sawmills and integrate into promotional documents for private sector interest; promote and facilitate investment (apply standard industrial investment incentives but be open to applying tailor-made extra incentives for the remote locations] Activity 15: Be open to fully private or PPP formats for the investments.</p> <p>Component 5: Upgrading of Wood-Based Panel Products Industry Activity 16: Even as the large mills are being developed, analyse feasibility of undertaking veneer slicing in cases where one option for teak exports would have been sale of “squares” Activity 17: As proportion of large logs increases, consider integrating rotary-veneer production for plywood manufacture integrated with sawmills. Activity 18: Carry out raw material assessment, with focus on mill wastes, to support reconstituted-wood (particle boards) panels manufacture on South Sudanese scale, subject to consumption having grown large enough to warrant this relatively capital-intensive type of panel.</p> <p>Sub-Project 3: Capacity-Building Programme for Integrated Forest Plantations and Forest Products Processing Component 6: Capacity assessment and capacity building. Bearing in mind the need to suit technology of the new mills: Activity 19: At time of feasibility assessments for upscaling (about 5 years before end of phase I), take account of the experiences of Phase I on plantation operations at both large and small scale and determine likely capacity-building needs with adjustments expected to the ways of doing and organising business under Components 1 to 5 above). Activity 20: Arrange for advance training for skills requiring long-term formal training, including attachments abroad. Activity 21: For short on the job training, carry out assessments and implement when activities are underway. Activity 22: Undertake full feasibility studies for finalisation of government forest plantations on public land to full size originally intended (30,000 ha at 1000ha/year) including implementation of the plantation programme, construction of roads/tracks, offices, housing etc. Build into privatisation and/or PPP prospectus and launch for bids, select and award.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	Afforestation and Natural Forest Conservation Department Survey and Inventory Department (staff of Forest Inventory project) Forest Industry Department
(2) Description of beneficiaries within the framework of the project:	Forestry Directorate: co-lead by Afforestation and Natural Forest Conservation and Forest Industry Departments (with inputs also from Agroforestry and Forestry Extension Department) Communities involved in plantation of trees for logs Private sector owners of forest plantations and processing mills

¹⁵⁰ If domestic market size by then allows, convert waste wood from the saw and veneer/plywood mills into particle/chip-boards of the type the market most demands. This requires co-location of saw and veneer/ply mills for accumulation of mill wastes, to which if necessary can be added small-diameter lops and tops from the forest (too small for the saw/veneer operations).

Items	Information					
2.4 Outcomes, impact and contributions to value added (i.e. economic growth)						
(1) Outcomes and impact:	New mills largely based on plantations and associated raw material catchments Export activity increased Wood product quality upgrade					
(2) EIRR and/or FIRR, and/or other economic analysis:	To be done at detailed formulation of project					
2.5 Environmental and social impact, and mitigation measures						
(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1" style="width: 100%;"> <tr> <td style="width: 20%;">Negative: b Positive: c</td> <td>Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society</td> </tr> </table>	Negative: b Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society			
Negative: b Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society					
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • If plantation establishment ignores need to conserve riverine vegetation and patches of indigenous forest in mosaics, unacceptable loss of biodiversity can result. • Some environmental damage could result if correct waste disposal at mills is not enforced. • Should a reconstituted-wood panel industry based on use of wastes from the saw/plymills be established, almost all waste wood would be internally consumed during processing either for manufacture or for energy-generation. <p>(Positive)</p> <ul style="list-style-type: none"> • Social gains in income and employment; environmental and economic gains from plantation activity • Employment and income especially from logging and processing activities 					
2.6 Monitoring and evaluation for impact measurement						
(1) Measurable indicators and situation at a starting point:	Existence of expanded plantations Sawmilling capacity and modernisation Whether start on plywood/veneer manufacturing Staff numbers by level of training Export activity					
(2) Measurable indicators and situation at the end point:	As at the starting point (to allow direct comparison)					
(3) Methods of measurement and sources of information:	Surveys Checking documentation					
(4) Responsible parties for the monitoring and evaluation:	Forestry Directorate management in cooperation with Ministry of Industry Missions, including government/development partner periodic progress-review missions					
2.7 Required human resources						
(1) Principle of human resources management:	Management level oversight over project; in addition: Gender-sensitive but competency/merit-based selection of counterpart staff (already competent or with good prospects of quick learning) Assignment of technically competent personnel and juniors able to learn Efficient and effective engagement of consultants and specialists outside of the government: all external experts to have a trainable counterpart Sufficient staffing					
(2) Required human resources in the public sector (Positions, grades and numbers):	Long-term staff: Full time very Senior Project Manager to manage upscaling and integration process Lead field operations officer (government plantations) and 2 field supervisors and 2 assistants Lead forest industry development officer Lead private sector plantations adviser Lead participatory tree planting adviser Field extension leaders (1 team of 3 for private sector; 1 team of 5 for participatory plantations)					
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	Paid consultants/short-term teams: Field labour (from nursery to planting and weeding) Technical advisors - Senior Consultants (planning tasks, initial detailed studies, specialised implementation tasks, capacity building) Volunteers: Significant, for cooperation both on raw materials and on investment in processing capacity Chamber of commerce, Industry and Agriculture potentially a key partner Industry association(s) if in existence					
2.8 Risk assessment with respect to project objectives and resources to be applied						
(1) Expected level of risk:	<table border="1" style="width: 100%;"> <tr> <td style="width: 25%; text-align: center;">M</td> <td style="width: 25%; text-align: center;">L: Low</td> <td style="width: 25%; text-align: center;">M: Medium</td> <td style="width: 25%; text-align: center;">H: High</td> <td style="text-align: right;">(select an indicator from the list)</td> </tr> </table>	M	L: Low	M: Medium	H: High	(select an indicator from the list)
M	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	If Phase I is done well, implementation of Phase II of the project itself faces very low risk.					

Items	Information
	But raw material adequacy must be confirmed before embarking on Phase II launch
2.9 Other special considerations and/or notes	
(1) Other special considerations and/or notes:	Ideally, performing project leaders/managers of the projects from Phase I should continue to Phase II for retention of capacity and institutional memory.
2.10 Routine operation and required resources after the completion of the project	
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>Expansion of planting (preferably by private sector)</p> <p>Government staff strength to continue if planting continues under government (i.e. not privatised) otherwise to reduce for focus to be on regulatory oversight; management of incentive scheme; technical support including research.</p>

4.4.11 Mainstreaming “Green-Economy” practices into forestry, forest industries and forest-based tourism project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Forestry		
(2) Project name:	Mainstreaming “Green-Economy” practices into forestry, forest industries and forest-based tourism project		
(3) Project ID:	0	3	1 1
(4) Start and ending fiscal year:	Starting FY: 2021/22	Ending FY: 2030/31	Duration (years): 10
(5) Total investment:	SSP 18,930,000	USD 4,732,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FO.SA2	Public Sector Institution and Management Capacity Development	Table 2-3
(2) Government organisation:	07	MAF-FO	Directorate of Forestry	Table 2-6
(3) Activity types:	101	ID-LI	Institutional Development – legal and institutional development	Table 2-12
	103	ID-PP	Institutional Development – policy formulation and planning	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	X
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	X
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	X
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

In view of the newness of the subject this “justification” section and the “project description” section which follows will be used also for general briefing on the concepts:

A Global Imperative: Of the many issues which collectively face the international community, few have as high a profile as climate change. There is a pervasive fear of global warming and strenuous efforts are underway to persuade governments and society to take it seriously: to adapt to it and to mitigate it by change economic behaviour so as to reduce man-made contributors to accelerated warming, i.e. “greenhouse gases”. The rapid entry into the atmosphere of certain gases creates a progressively heavy “blanket” which traps heat from leaving the earth’s atmosphere: it is accepted science that carbon dioxide is a leading gas among these because it is generated in such large amounts by mankind. Even more effective in global warming are other gases which fortunately are generated in smaller amounts: methane, nitrous and sulphur oxides etc.

Even without adoption of a legally binding agreement on how to combat climate change, countries are making efforts to minimise whatever practices worsen climate change. They try to reduce wastage of energy; release of smoke by industries; use of fossil fuels; deforestation; wild fires etc. Collectively, adoption of such measures is labelled “green economy” practices. This project proposes that South Sudan adopts and mainstreams “green economy” practices in the forestry sector. Ideally, South Sudan needs to do the same for all agriculture and in fact for all economic sectors. This will position it as a leader and exemplary player internationally in slowing down global warming.

Agriculture and Forestry in Climate Change: While industry and households may be prime sources for generating carbon dioxide – the leading greenhouse gas - agriculture also has central roles in the matter. As forests are cleared for cropping, especially if vegetation is burned, carbon is released in large quantities. Soils, especially if never opened, store a lot of carbon, which they then release when opened up; natural forests and even plantations when not disturbed store much carbon too, while growing forests capture carbon and convert it to wood. Animals release a lot of methane.

With its roles in both storage and release of carbon dioxide and other greenhouse gases, agriculture is central to climate change and within it, forests are particularly critical in mitigation through their carbon sequestration capacity.

Project Justification: This project is strongly justified by the fact that South Sudan as a member of the international community, will no doubt wish to play its part and meet its obligations towards collective responsible behaviour to protect the global environment.

The project is also justified because even though inability to comply with climate change protocols is not yet a barrier to trade, the likelihood of this happening is significant. Closely allied to climate change are concerns about unsustainable management of natural resources generally. Heavy use of fertiliser (which causes release of nitrous oxides – a far more potent greenhouse gas than carbon dioxide) is also frowned upon and could be part of trade conditionality. Wanton destruction of nature that releases carbon (such as deforestation or forest fires) is already frowned upon and features in assessing whether traded goods have been produced in an environmentally acceptable manner.

It is safest for South Sudan to anticipate future challenges and prepare itself. The forestry sector should be a central part of this readiness and this project will assist in making this possible.

It is about all Forests, not Just Forests in Reserves: In dealing with ensuring that forests play their part in climate change mitigation, it is important to recognise the following:

- All vegetation is useful as carbon sink and if cleared or burned, all vegetation releases carbon and worsens the atmospheric greenhouse gas load. Climate and the atmosphere do not distinguish between government forest reserves and trees outside reserves: it is therefore critical that South Sudan’s efforts to introduce “green economy” practices, i.e. practices that minimise threat of global warming, pay attention to all forests within and outside forest reserves.
- According to Table 10.1 in the August 2014 draft CAMP Livelihood Zone Data Book, of South Sudan’s total land area, some 208,157km² (33%) is covered by trees and another 257,236km² (40%) by shrubs. Thus, some 73% of the country has forests or quasi-forest ecosystems important for carbon sequestration.
- Officially reserved areas cover far less area, only an estimated 19,500km², which is just under 9% of the tree-covered land area of the country and just over 3% of the overall

	<p>land area. Subtracting the reserved areas from the total area of tree-covered land would still leave over 203,730km² of trees and 257,236km² of shrubs which are not protected by government.</p> <ul style="list-style-type: none"> • These numbers, even if not precise, show that from the climate change mitigation perspective, South Sudan will not achieve significant impacts if it focuses only on reserved forest: it must also attend to trees that grow outside.
(2) Objectives:	<ul style="list-style-type: none"> • To improve knowledge on potential of the forest sector to contribute to combating climate change at all stages of its value chains • To enable the forest sector to interact synergistically with other sectors in adopting “green economy” practices • To initiate and mainstream implementation of green economy practices in all aspects of the forestry sector including beyond government reserves • To develop and operationalise an information and analytical system on climate-change relevant aspects of forestry so that South Sudan is able to comply with internationally agreed systems of Monitoring, Reporting and Verification and to be able to engage in carbon trade [whether domestic or international] on the basis of sound and certifiable data • To initiate domestic carbon trading as a mechanism for promoting self-restraint by sectors or activities that would otherwise wantonly release carbon if there were no incentives for good behaviour or “sanctions” for irresponsibility. The payments would go to sectors (forestry key among them) that sequester carbon.
(3) Overall description including temporal and spatial extent of project:	<p>Given the newness of the project area, it is necessary to have a period of “gentle canvassing” to persuade decision-makers and broader society at large to give “green economy” interventions the priority they deserve. For this reason, it is proposed that the project starts in 2021/22 for 10 years till 2030/31. It is almost inevitable that either the project or substantive government funded activities will succeed the project and be a permanent part of the government’s agenda.</p> <p>Climate change is happening now and international engagement with “green economy” practices is better done sooner than later. The basic understanding is that the influence of all economic activities on climate change is about a country’s cumulative additions to greenhouse gases and cumulative subtractions from them: a “green economy” approach seeks at all stages of the value chains to maximise subtractions and minimise additions to carbon release.</p> <p>The mainstreaming efforts of the project need to have three dimensions which aim to deliver supremacy of carbon minimisation over its maximisation:</p> <p>action on the ground to minimise carbon release and maximise its capture and storage;</p> <p>record-keeping for compliance with internationally agreed Monitoring, Reporting and Verification (MRV) of the carbon balances; and</p> <p>Based on the record-keeping at (b), adoption by South Sudan of internal carbon trading so that sectors that easily or irresponsibly release carbon pay into sectors (forestry key among them) which sequester the carbon. This would be in addition to any carbon sales the country would take up to the global community.</p> <p>To rapidly minimise greenhouse additions and maximise subtractions, government will no doubt need to promote green economy practices in all economic sectors, so that the pressure of climate change is not shouldered only by agriculture or forestry.</p> <p>Men and women relate to agricultural activities differently. Thus, to the extent that climate change adaptation or mitigation may constrain certain agricultural activities more than others, its impacts are not going to be gender-neutral; planning must take this into account. The same will apply within forestry. In engaging with other agricultural sub-sectors, the forestry project will need to recognise the different contributions of crops, livestock etc to climate change, which means which calls for agreement on how much each sector should act:</p> <ul style="list-style-type: none"> • Only about 4% of the country is cultivated: there is pressure to increase this and this has carbon-release implications from forest cover loss and exposure of soil carbon. But forestry must recognise that this would almost certainly be “justifiable deforestation”; • Given the large livestock population, the livestock sector releases considerable methane, a more potent greenhouse gas than carbon dioxide. Control measures in the livestock sub-sector must therefore be on the table in setting intervention priorities; • The country has extensive swamplands, parts of which may be stagnant and are therefore important sources of methane release. This source of greenhouse gases too must be on the table in setting priorities; • Within the forestry sector itself, several aspects need to be taken into account which affect carbon sequestration and release roles in the entire value-chain:

	<p>In view of the background information in section 2.1(1) on South Sudan tree/shrub cover, the project should cover all forests both inside and outside forest reserves;</p> <p>There is carbon storage capacity in natural vegetation and in long-term plantations;</p> <p>Considerable carbon release comes from wild fires and shifting cultivation;</p> <p>non-tree vegetation which grows and dies seasonally is just like annual crops and by quick decay or termite activity releases stored carbon faster;</p> <p>there is carbon release through firewood and charcoal use and the more inefficient it is, the worse the release;</p> <p>processed wood products that enter long-life use (e.g. in construction or in furniture) maintain their carbon storage function; and</p> <p>wastes (e.g. slabs in sawmills or branches in the field) which are then soon burned, release carbon just like firewood and charcoal.</p>
(4) Component structure:	<p>Component 1: Prioritisation of areas of green-economy interventions for best returns to effort</p> <p>Component 2: Piloting systematically building green-economy practices (including record – keeping for MRV and carbon-trade purposes) into sector value-chain management practices</p> <p>Component 3: Development of regulations and incentives for progressive (some time-delayed to allow adaptation) adoption of green principles in forestry value chains</p> <p>Component 4: Integration of forestry into national Climate Change plans and contributing to any nationwide and multisectoral development of institutional arrangements for promoting transformation into a green economy (including forestry components of national climate change plans) and adapt agreed measures for application in the forestry sector</p> <p>Component 5: Progressively mainstream: (a) Carbon assessment for international Monitoring, Reporting and Verification and for compensation (carbon trade) mechanisms; and (b) Certification for traded forest products and services</p> <p>Component 6: Capacity building and public environmental education on climate change</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs	<p>In piloting, aim for coverage on reserves and non-reserved forests; natural and plantation forests; processing; trade; consumption of forest products; forest-based tourism.</p> <p>Component 1: Prioritisation of areas of green-economy interventions for best returns to effort</p> <p>Activity 1: Prepare a brief of overall Government of Sudan policies, plans, programmes, initiatives and institutional arrangements related to climate change, highlighting elements for the forestry sector</p> <p>Output: Report with recommended forestry climate change intervention priorities</p> <p>Activity 2: Screen the workplans of all forestry projects under CAMP and other umbrellas to identify entry-points for addressing climate change and mainstreaming green economy measures, with proposals for adaptation to their implementation plans.</p> <p>Output: Report on ongoing and planned activities and how “green economy” mainstreaming can link to them</p> <p>Component 2: Piloting systematically building green-economy practices¹⁵¹ into sector value-chain management practices</p> <p>Activity 3: Select locations representing the full range of forestry/shrub ecosystems and of artificially-established plantations and farming systems that include trees for piloting of green economy actions¹⁵² and record-keeping. Indicatively, this could be 20 situations, of which;</p> <ul style="list-style-type: none"> 3 on land-use change (e.g. Western Bahr El Ghazal, Imatong Mosaic, Green belt); 3 on natural vegetation cover outside reserves; 3 on diverse forest reserves; 2 on agroforestry systems; 2 on fuelwood/charcoal focused forest use; 3 on forest industries of contrasting operational scale; 2 on forest products trade; 1 on forest products in use [combination of construction and household (furnishing) use] 1 on a prominent forest-based tourism value chain (e.g. Boma).
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¹⁵¹ Including record –keeping for MRV and carbon-trade purposes.

¹⁵² If there are ongoing REDD and REDDand activities, link this to them.

<p>Output: Selected pilot activities and site(s)</p> <p>Activity 4: In each locality, define the full value chain of forests from field through either land use conversion or processing, trade and consumption to design approaches for applying green economy measures, including internationally-compliant record-keeping</p> <p>Output: build up a profile of each pilot regarding its “greenness” of current operational practices and what would need changing for a “green economy” – realising that perfection costs too much to be attainable.</p> <p>Activity 5: Design a system of information gathering, record keeping and oversight that is compatible with economy-wide intentions that are compatible with international agreements applicable at the time.</p> <p>Output: Include in each pilot at Activities 3 and 4 design of internationally compatible record keeping for MRV, for carbon trade reporting etc with clear “norms” against which to assess achievement</p> <p>Activity 6: Undertake pilot activities for a National Carbon-Trading System (domestic and external carbon sales) plus the 20 pilots prioritised at Activity 3 and unify ongoing REDD/RED and activities. Apply to all these the adequate reporting systems designed at Activity 5 to allow lesson-learning for later upscaling of national best-practice. Establishing an Association for REDD and-related initiatives:</p> <ul style="list-style-type: none">Building on ongoing dispersed government, private sector and NGO activities on forest carbon (such as REDD and investments recently under planning in Equatoria), promote an association:provide a secretariat for it,start and sustain a newsletter and contracted out radio/TV publicity for it and establish links to policy-makers and the general public;provide a fully equipped and staffed audio-visual van (station-wagon 4x4) for public extension work30-seater midi-bus for school and youth groups learningPublicity office and 2 driversContract for public communications and promotion <p>Output: Operational pilots including of a national carbon-trading system; an association of REDD/RED and other carbon-capture projects and related initiatives</p> <p>Component 3: Development of regulations and incentives for progressive (some time-delayed to allow adaptation) adoption of green principles in forestry value chains.</p> <p>Activity 7: Review international best practice for regulations and incentives¹⁵³ for promoting green-economy approaches in forestry and propose adaptation to South Sudan’s circumstances.</p> <p>Output: Report on best practice with recommended adaptations to South Sudan</p> <p>Activity 8: Initiate a process of adoption by government and execute trial application before formalisation of a set of regulations and incentives for green economy practices in forestry.</p> <p>Output: Application of regulations and incentives for the green economy; Periodic progress and performance reports – comparing to international norms</p> <p>Component 4: Integration of forestry into national Climate Change plans and contributing to any nationwide and multisectoral development of institutional arrangements for promoting transformation into a green economy (including forestry components of national climate change plans) and adapt agreed measures for application in the forestry sector.</p> <p>Activity 9: In the context of overall economy-wide climate change initiatives, analyse in detail possible forestry sector roles and their cost-benefit terms relative to effort and resources. Prioritise and propose sequencing of engagement by the sector and specifically by the project. Prepare proposals for integration of forestry in any national action plans and workplan for implementation of its roles.</p> <p>Output: Report on: existing national plans; forestry’s role in them and proposed integration measures; workplan for the forestry component</p> <p>Activity 10: Support participation by experts from government and the private sector in economy-wide and agricultural sector working groups on green economy and climate change with a view to ensuring adequate recognition of the contributions of forests, access to adequate resources for this, and to transmit to the forestry sector economy-wide decisions for adaptation.</p> <p>Output: Participation</p> <p>Component 5: Progressively mainstream: (a) Carbon assessment for international Monitoring, Reporting and Verification and for compensation (carbon trade) mechanisms; and (b) Certification for traded forest products and services</p> <p>Activity 11: Based on international agreements and best practice, design national system of collecting information, analysing it and fulfilling standard MRV and carbon trade</p>
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¹⁵³ To minimize abuse, incentives should generally avoid cash payments. Industries can gain from tax-exemptions for more efficient machinery or field equipment.

<p>requirements (build in norms adopted for national piloting at Activity 6 and 8). Output: National yet internationally compatible reporting system for forestry to allow compliance with expected MRV and carbon trade standards</p> <p>Activity 12: Align green-economy practices being piloted with other “sustainable development” practices normally covered by environmental certification and traceability practices for trade in forest products. Output: Interim Guidelines</p> <p>Activity 13: Align green-economy practices being piloted with other “sustainable development” practices in the field of forest-based tourism. Output: Interim Guidelines</p> <p>Component 6: Capacity building and public environmental education on climate change Activity 14: Assessment of training needs for a green economy in forestry but with concrete proposals assuming progressive rather than abrupt mainstreaming Output: realistic numbers to be trained</p> <p>Activity 15: Staff trained on all aspects of forests and the green-economy (as reflected in Activities 1 to 13 above) in government. Output: Trained and briefed people at various levels</p> <p>Activity 16: Public environmental education on climate change and green economy practices. Output: See also Activity 6 and link; adapted publicity material for websites; leaflets, school briefs; policy briefs; TV and radio messages; exhibition stand displays etc . Contracts: can do indicative lump-sum budget</p>
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2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<ul style="list-style-type: none"> • CAMP Programme Implementation Unit to arrange for all other subsector projects (crops, livestock, fisheries, ID) to see how best the entire programme gets engaged in climate change and green economy matters. • all other forestry projects, since some implementation arrangements for green economy are best done through those other projects • Forestry Directorate: Forest Economics and Programme Department in cooperation with all other Departments
(2) Description of beneficiaries within the framework of the project:	The Forestry Directorate as a whole would be the most direct beneficiary. Other CAMP subsectors could also be beneficiaries, depending upon its decisions on mainstreaming climate change in all sub-sectors

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<p>In context of overall economy, plans for engagement of forestry with green economy initiatives including action and record-keeping. Action in selected pilots on green economy Progressive build-up of national best practice in green economy measures in forestry Impact: more compliant management of forests within and outside protected reserves.</p>
(2) EIRR and/or FIRR, and/or other economic analysis:	To be done at detailed formulation of project

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: a</td> <td>Project:</td> </tr> <tr> <td>Positive: d</td> <td>a: is likely to have minimal or little impact on the environment and/or society</td> </tr> <tr> <td></td> <td>b: may have an impact on the environment and/or society</td> </tr> <tr> <td></td> <td>c: is likely to have a significant impact on the environment and/or society</td> </tr> <tr> <td></td> <td>d: will have a significant impact on the environment and/or society</td> </tr> </table>	Negative: a	Project:	Positive: d	a: is likely to have minimal or little impact on the environment and/or society		b: may have an impact on the environment and/or society		c: is likely to have a significant impact on the environment and/or society		d: will have a significant impact on the environment and/or society
Negative: a	Project:										
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	b: may have an impact on the environment and/or society										
	c: is likely to have a significant impact on the environment and/or society										
	d: will have a significant impact on the environment and/or society										
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Positive)</p> <ul style="list-style-type: none"> • In a world sensitive about climate change, “green” credentials are of fundamental importance for all economic sectors. • Can enable country to become compliant if green economy achievements become conditionalities for market access in future. • Social gains are possible from carbon trade income and new skills. 										

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<p>Existence of green economy protocols for forestry Baseline reports and successive reports (every 5 years?) on carbon budget and trends for the forestry sector and for segments of its value chains Integration of forests in the economy-wide green economy plans and programmes of South Sudan Popular publicity /awareness materials (leaflets; website) on forests and the green economy Green economy trained staff numbers by level of training</p>
(2) Measurable indicators and situation at the end point:	As at the starting point (to allow direct comparison)
(3) Methods of measurement and sources of information:	Surveys Checking documentation
(4) Responsible parties for the	Forestry Directorate management in cooperation with Ministry responsible for Climate

monitoring and evaluation:

Change (probably environment or Planning) Missions, including government/development partner periodic progress-review missions

2.7 Required human resources

- | | |
|--|---|
| (1) Principle of human resources management: | Management level oversight over project; in addition: <ul style="list-style-type: none"> • Gender-sensitive but competency/merit-based selection of counterpart staff (already competent or with good prospects of quick learning) • Assignment of technically competent personnel and juniors able to learn • Efficient and effective engagement of consultants and specialists outside of the government: all external experts to have a trainable counterpart Sufficient staffing for regular support to green economy mainstreaming in pilots and later during upscaling |
| (2) Required human resources in the public sector (Positions, grades and numbers): | Long-term staff: <ul style="list-style-type: none"> • Full time Senior level officer to lead team • Public Relations and Communications officer • Carbon assessments, Monitoring, Reporting and Verification Officer • Lead field assessments officer and 5 assistants |
| (3) Required human resources in the private sector including consultants (positions, qualification and numbers): | Paid consultants/short-term teams: <ul style="list-style-type: none"> • Technical advisors (specialist tasks such as development of protocols)Liaison people in all segments of the value chains • Volunteered: <ul style="list-style-type: none"> • Chamber of Commerce, Industry and Agriculture focal point • Chamber of Tourism focal point |

2.8 Risk assessment with respect to project objectives and resources to be applied

- | | | | | | | |
|------------------------------------|---|-----------|---------|-------------------------------------|---------|-------------------------------------|
| (1) Expected level of risk: | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px 10px;">M</td> <td style="padding: 2px 10px;">L: Low</td> <td style="padding: 2px 10px;">M: Medium</td> <td style="padding: 2px 10px;">H: High</td> <td style="padding: 2px 10px;">(select an indicator from the list)</td> </tr> </table> | M | L: Low | M: Medium | H: High | (select an indicator from the list) |
| M | L: Low | M: Medium | H: High | (select an indicator from the list) | | |
| (2) Explanation of expected risks: | <ul style="list-style-type: none"> • Implementation of the project itself faces very low risk. • If central government does not prioritise action on climate change, there could be hurdles to accepting a climate agenda in forestry and any other sector, especially given many other pressing priorities | | | | | |

2.9 Other special considerations and/or notes

- | | |
|--|--|
| (1) Other special considerations and/or notes: | Engage the research community in the project
Press for <i>domestic carbon-trading</i> , with polluting of carbon-releasing activities and industries to help finance carbon-capturing sectors like forestry |
|--|--|

2.10 Routine operation and required resources after the completion of the project

- | | |
|--|---|
| (1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner. | As for project period but plan for expansion beyond pilots. |
|--|---|

4.4.12 National forest resources inventory, information and management plans project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Forestry
(2) Project name:	National forest resources inventory, information and management plans project
(3) Project ID:	0 3 1 2 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development
(4) Start and ending fiscal year:	Starting FY: 2015/16 Ending FY: 2039/40 Duration (years): 25
(5) Total investment:	SSP 1,097,671,000 USD 274,418,000 Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FO.SA5	Management and conservation of public forests	Table 2-3
(2) Government organisation:	07	MAF-FO	Survey and Inventory	Table 2-6
	07	MAF-FO	State-level equivalent organisation	Table 2-6
(3) Activity types:	201	SP-IM	Service delivery and Infrastructure development - information management and analysis	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	X
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	X
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income		

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>Justification for Inventory Project: South Sudan is fortunate in having relatively abundant land. To ensure that in future the country gets optimum economic, social and environmental benefits from it, it is best if the country comes close to using each type of land for what it is most suitable to do. For this, it is advisable to assess the land in terms of its suitability for various end-uses; reliable information on this can help minimise possible future conflicts among sectors or among ownership categories.</p> <p>Matching land capability with end uses is important at a macro level but even at operational scale, such as to identify within government forests what suits each land use best and also to confirm boundaries between lands controlled by government (e.g. reserves or parks) and those owned or controlled by individuals or by private and communal institutions. Once available, such information has intrinsic value since it creates a basis for informed decision-making by all stakeholders.</p> <p>Management planning for forest resources also needs inventory information.</p> <p>Levels of Inventory: The first level is a broad-brush determination of how much forest there is and how close the actual state of forests is to the Forest Policy goal of 20% land cover being under forests. It also helps to determine in broad terms what the various types of forest or woodland might be most suitable for. The second level is to update and confirm public forest boundaries at national and state levels; this is essential for enforcing property rights or offering a basis for negotiation if these need adjustment. The third level, which is the most detailed, gives the productivity/yield potential of forests for timber or whatever produce is the objective of management. These three levels of inventory would be backed up by a database from which data can be extracted for analysis or planning use.</p> <p>Management Plans: The availability of information from the inventory and database activities will make possible one of the prerequisites for management of resources, preparation of management plans.</p> <p>Forestry activities occur over a long rotation; unlike agriculture where a farmer can easily remember what they did during the growing season, it is difficult for a forester to recall an intervention which may have occurred 30 or 60 years earlier. Yet management interventions or natural events affect eventual productivity – these could be fires, drought, harvesting, pruning, etc; therefore they must be recorded and factored in when prescribing further management interventions or assessing the returns to effort. With plans in hand, a forest owner or manager is able to estimate within narrower confidence limits what the forest will yield in goods and services.</p> <p>It is this that justifies having a management planning activity in the project. Management planning is required for the government's own central and state reserves but given its ambitions to reserve more land, some planning is also required for forests outside reserves. This project cannot engage in details of each management unit's operational needs, but should do a broad-scale level of planning which the operational projects can use as points of departure for their own detailed work.</p>
(2) Objectives:	<ul style="list-style-type: none"> • Update forest resources information for use in planning and store it in accessible database(s) from which to generate information products, including maps. Key data types to include satellite imagery; aerial photographs; derived information from earlier inventories of Central Forest Reserves and State Forest Reserves; ground forest survey/measurement information; quality and quantities of forest resources with their geographical distribution; and derived broad information such as on geographic spread of livelihoods, economic activities, land use classification, topographical and thematic maps. • The overall output would be a growing body of information on forests/woodlands (including plantations) stored in a readily-accessible database. A growing body of information products such as land-use reports and maps; forest boundary maps; inventory reports; website accessible products. • An information resource centre with an increasing number of staff, trained on the job based on equipment acquired and with suitable office space. • Prepare indicative (long-perspective) management plans for Central and State Forest Reserves including government plantations; these broad plans are to cover all important objectives of management in a given forest, not just for timber.
(3) Overall description including	The project is to start in 2015/16 and last for 10 years till 2024/25. The project will cover all

Items	Information
<p>temporal and spatial extent of project:</p>	<p>forested areas in South Sudan. Sequencing among states will be guided by significance of forests/woodlands in a given state (or counties), the potential for early launch of industrial investment, and the existence of earlier information on the resources, such as that collected under the Norway-funded project "Land Resources Survey and Information Centre" which undertook data collection, database development and maintenance, data processing, statistics, maps, reports and information dissemination. (Sudan Forestry Sector Programme 2009-GIS Unit; Norwegian Forestry Group).</p> <p>It will be important to ensure close collaboration with the government authority responsible for all land surveys and the Land Commission. Due to political reasons, boundaries between bomas and payams will not be determined. The following provides additional detail regarding the activities/types of information to be collected at each level of inventory:</p> <ul style="list-style-type: none"> • For the first level of inventory, a nation-wide assessment of forest lands, in public, private and communal ownership or control, will be performed. The assessment should aim to categorise land into suitability classes, for which breakdown could be into some or all of the following: (a) classical conservation (forest reserves); (b) conservation and amenities for ecotourism (national parks, game reserves, riverine recreation forests etc); (c) watershed protection; (d) setting aside for industrial exploitation and/or industrial forest plantations; (e) conversion to non-forest uses (such as cropping; livestock rearing, human settlement, and public infrastructure such as roads); (f) potential for joint management with communities; and (g) joint use for forests and any other suitable use (such as grazing in the forest). Ideally, this should be done in the context of an overall land-capability assessment of all lands (forest and non-forest) in the country. This first level assessment would give orders of magnitude on overall extent of forest and woodland areas even outside reserves; and, include identification of lands within forests that are better suited for other end-uses. This work requires close collaboration with others who are also working on broad land use, most probably in the Land Commission but most likely also in other directorates of the Ministry of Agriculture. • The second level updates and confirms public forest boundaries at national and state levels. To manage and conserve the public forest resources, demarcation of public forest reserves and their mapping is essential; it follows the first level nation-wide resource assessment of all forests and woodlands. <p>The need for updating forest reserve boundaries is especially high where these have been breached, sometimes to the point where whole reserves remain gazetted but not traceable. Annex 1 to the new Forest Policy reveals a number of such cases, where gazette numbers are published but no forest could be found and reported. In some cases, the original reserve area has shrunk; in others the quality of residual resources has declined, whether of indigenous forest or plantations, including those of valuable teak. Management of the resources requires re-establishment of boundaries in such cases and attention to boundary records for all reserved forests. Furthermore, challenges to private sector investor land allocations require government capacity to help with boundary issues.</p> <p>Where additional conservation areas are needed, boundary demarcation can be done once agreed by stakeholders.</p> <p>This will form a base for prioritising interventions into forest resources conservation, enhancement through tree planting, tending, protection, and utilisation in a sustainable manner.</p> <ul style="list-style-type: none"> • For the third, more detailed level of inventory, an assessment should include forest inventories of (a) Central Forest Reserve natural forests with potential for commercial harvest under concessions, and (b) industrial plantations (mostly teak but pines and eucalypts are also mentioned). For the latter, rough assessments were already conducted after the CPA in the states of Central Equatoria and Western Equatoria and the new inventories should confirm or adjust the earlier findings. <p>To underpin the entire above information gathering requires development of an information system, including a database, the means to keep it updated, capacity to analyse the information it contains and to produce maps and other products to disseminate and to use in planning.</p> <p>The project will also use the information to prepare broad perspective long-term management plans for forest reserves and (indicatively) for forests outside reserves. This planning work will enable the government to prioritise its management efforts, including deciding on where to reserve more forest.</p>
<p>(4) Component structure:</p>	<p>Component 1: Planning for forest land use optimization through progressive updating of land capability classification and land use information on forests (within and outside reserves) in order to identify land suitability for various purposes, followed by</p>

Items	Information
	<p>negotiation and finalisation of forest reserve boundaries.</p> <p>Component 2: National forest resources assessment, including execution of an updated inventory of commercial plantations</p> <p>Component 3: Database development and information dissemination capacity</p> <p>Component 4: Using the inventory information, preparation of indicative (long-perspective) management plans for Central and State Forest Reserves including government plantations</p> <p>Component 5: On the job training and other capacity-building for forest resources assessment and information (Phases I / II)</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Planning for forest land use optimization through progressive updating of land capability classification and land use information on forests (within and outside reserves) in order to identify land suitability for various purposes, followed by negotiation and finalisation of forest reserve boundaries. The following would be among the land use purposes to consider: classical conservation (forest reserves); conservation and amenities for ecotourism (national parks, game reserves, riverine recreation forests etc); watershed protection; setting aside for industrial exploitation and/or industrial forest plantations; conversion to non-forest uses (such as cropping; livestock rearing, human settlement, and public infrastructure such as roads); potential for joint management with communities; and joint use for forests and any other suitable use (such as grazing in the forest). This project requires close collaboration with the Land Commission and the ministry responsible for development planning.</p> <p>Activity 1: Overall (broad-brush) determination of overall forest cover for the country and identification and classification of forest and land use types by remote sensing technology</p> <p>Output: Report on overall national forest cover inside and outside forest reserves; on land use types with greater detail for pilot states; low-resolution data and maps on biomass and wood volumes, commercial values, and biodiversity</p> <p>Activity 2: Creating of topographical and thematic maps based on aerial photogrammetry technology</p> <p>Output: (a) Set of maps at 1:50,000 scale to full country coverage - topography, thematic (vegetation, hydrology, roads and infrastructure, socioeconomic, land use, agricultural maps, etc); (b) Set of forest reserve maps at higher scale for detail (e.g. for concessions and plantations) can be considered a special order at greater price.</p> <p>Activity 3: Negotiation of boundaries where clear agreement not already in place (if existing reserves) or new boundaries have to be agreed (if new reserves).</p> <p>Output: Formal agreements, supported by co-signed (by stakeholders) records of discussions and their agreements, duly legalised and deposited with a competent authority (presumed to be registrar of Lands or Land Commission)</p> <p>Activity 4: Demarcation and survey of Central Forest Reserves and State Forest Reserves followed by forest boundary updating and rectification in cases of local community and inter-sectoral disputes¹⁵⁴</p> <p>Output: maps and records (including digital) of re-created boundaries; consolidated report for the whole boundary reclaiming exercise; boundaries surveyed and maps produced for top 10 reserves (selected Central Forest Reserves and State Forest Reserves) by size</p> <p>Activity 5: Support to private sector boundary demarcation in cases of local community and inter-sectoral disputes with forestry investments</p> <p>Output: case by case reports and maps. Exercise to be on at least part cost recovery basis</p> <p>Component 2: National forest resources assessment, including execution of an updated inventory of commercial plantations</p> <p>Activity 6: Inventory of forest reserves – indigenous forests/woodlands with timber harvest potential</p> <p>Output: Completed inventory of top 5 (in terms of harvest potential) reserves with following reports: (a) High resolution inventory of Central Forest Reserves (starting with largest) in terms of stand composition, volumes and values of natural and plantation forests; (b) High resolution inventory of selected state and community forest reserves in terms of stand composition, volumes and values of natural forests; and (c) Pre-Concession inventories (with ground-truthing of harvest potential) of selected high-potential areas in selected reserves)</p> <p>Activity 7: Inventory of forest plantations</p> <p>Output: With priority to larger and high-potential plantations, and to eventually cover all plantations completed unless inaccessible: Reports to give stand composition, volumes and values</p>
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¹⁵⁴ In all agro-ecological zones but starting with where encroachment and damage to forests is most severe.

Items	Information
	<p>Component 3: Database development and information dissemination capacity</p> <p>Activity 8: Design, testing and establishment of national forest resources inventory database</p> <p>Output:</p> <p>Designed, fully tested database established and populated with data from activities under project components 1 and 2 plus data capture from prior survey and/or inventory projects and scans of historical maps. Database integrated with earlier Norwegian-supported database information from the Sudan Forestry Sector Programme 2009-GIS Unit (Norwegian Forestry Group)</p> <p>Protocols for uploading and accessing information.</p> <p>Interface protocols for linkage and mutual access with national land use databases, probably kept by the Land Commission and with land-related databases within the Ministry of Agriculture and that for Livestock</p> <p>Standard reports and maps</p> <p>Database window created for socio-economic data organised to allow overlay/matching with forestry resource data.</p> <p>Database window also created for forest-based activities higher up the value-chain (processing; utilisation; markets) to interact with resource information</p> <p>Contract for supply of updated satellite images every 5 years for another 25 years and for repeat aerial photography 2 more times at 10 year intervals.</p> <p>Contract for technical backstopping with regionally recognised remote-sensing centre for another 10 years.</p> <p>Component 4: Using the inventory information, preparation of indicative (long-perspective) management plans especially for Central and State Forest Reserves including government plantations. Management planning requires clear understanding of stakeholder ambitions. It is not obvious that forests should always be managed only or mostly for timber. In cases of joint management with communities, for example, cases may often arise where communities want timber, firewood, grazing rights etc in the same forest. There will also be stakeholders who want to engage in entrepreneurial activities and many who want only subsistence; both need attention and can be accommodated. A clear understanding is therefore needed of who are the stakeholders (both men and women) that have a right to be listened to as plans are prepared. In this project, only broad plans are to be prepared; detailed plans for operational management will be done under projects on forest reserves management, participatory forestry development, and plantations development.</p> <p>Activity 9: Prepare broad perspective plan for management of government natural forest reserves and plantations and for backstopping non-state forestry management planning, covering entire management planning for range of forest functions (goods, services), with capacity to highlight in report the significance in terms of the following:</p> <ul style="list-style-type: none"> Indicative management priorities of Central and State Forest Reserves – indigenous forests/woodlands Areas and locations of Management Plans for old-growth plantations Indicative management priorities for forests with scenic and tourism potential Indicative management priorities for forests best suited for watershed and riverine protection Indicative management priorities (developed in cooperation with IUCN, Department responsible for wildlife, and National Herbarium (if it exists)) for areas of special biological richness or facing extraordinary threat With much less detail, give indicative management priorities (including whether reservation should be contemplated) for forests/woodlands outside reserves. <p>Output: Completed broad management plans for all Central and State reserves; broad prescriptions for management priorities for vegetation outside reserves</p> <p>Component 5: On the job training and other capacity-building for forest resources assessment and information (Phases I / II)</p> <p>Activity 10: Integrate into each of the components 1 to 4 its own on the job training</p> <p>Output: 20 staff trained on the job for: data capture (3); field surveys and inventory (10); dissemination of information including map-making (3), reports (2), website dissemination(2)</p> <p>Activity 11: Long-term training needs assessment and execution for the inventory and database functions.</p> <p>Output: 3 diploma level local; 3 diploma level abroad; 2 undergraduate degree-level abroad; 1 postgraduate abroad</p> <p>Activity 12: For the broad perspective management planning section of the Inventory Unit, undertake estimation of skill gaps, institutional organisation changes and other capacity building needs and propose necessary institutional reorganisation and other capacity building and training.</p>

Items	Information
	<p>Output:</p> <p>Report with proposed reform of organisation for management plans preparation and capacity-building requirements</p> <p>Newly organised management plans unit in the inventory section established, staffed and equipped, with easy links to Inventory unit and database and sharing its map-making capacity and library – lump sum US\$500,000 including consultancy support;</p> <p>Training programme launched and implemented: 1 consultant 12 months; specialised trainers 12 months; national manager/head; 5 staff]</p> <p>Activity 13: Fund construction or modification of suitable premises and purchase and installation of all necessary equipment for inventory and information centre.</p> <p>Determine if suitable structure exists to house the project activity or decide on a new building</p> <p>Design of modifications to existing structure or new one and commissioning: assume additional 10 x 30m more space</p> <p>Assess available equipment and specify any additions then procure. It is expected that a fully-functional survey/inventory and information resource centre may need to be established (equivalent to 30m x 70m)</p> <p>Output: upgraded premises</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<ul style="list-style-type: none"> • Service provider is the forest survey and inventory department under the Directorate of Forestry. • Technical services will be provided by consulting firms and/or consultants for data analyses and establishment and maintenance of national forestry databases. • Temporary field teams will be recruited and disbanded from time to time to suit workload.
(2) Description of beneficiaries within the framework of the project:	<ul style="list-style-type: none"> • Beneficiaries of the project will be forest management planners and implementers, and forest extension workers within the national and state governments. Beneficiaries also include the general public who are involved in local forest and natural resources management, utilisation, and conservation, and mitigation of natural resources related conflicts.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<ul style="list-style-type: none"> • The database created by this project will be used to develop national and state forest reserve management plans, plans of commercial forestry support projects, community forestry management plans, and other natural resources management plan development activities. Therefore, the project is a fundamentally important underpinning for sound management and utilisation of natural and forest resources. • Due to timely availability of broad management plans, better-managed forests with no inadvertent overlooking of timely critical management interventions
(2) EIRR and/or FIRR, and/or other economic analysis:	<ul style="list-style-type: none"> • To be done at detailed formulation of project

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td> Negative: a Positive: c </td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: a Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: a Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Positive)</p> <ul style="list-style-type: none"> • This project will, by providing information and plans for sound decisions on natural vegetation management, potentially enhance the government's capacity to protect, conserve, and utilise forest resources in a scientific manner so as to permit sustainable development of economic activities (hence employment and income) while minimising, managing, and controlling adverse environmental and social impacts. • Therefore, if well used, the products of the project can have significant and positive impact on the environment and society. 		

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • Share of country with availability, types, and up to date topographical and thematic maps, especially on forest/woodland cover • Number of forest reserves surveyed, demarcated, and inventoried • Number of forest plantations surveyed, demarcated, and inventoried • Comprehensiveness and how up to date the existing forest resources databases are, and their utilisation • Range of information products on forest resources (maps, reports, publications etc) • Existence of broad management plans including suggestions for further reserves • Numbers of people trained in key disciplines for forest and land assessment, forest inventory and information systems for both, including dissemination
(2) Measurable indicators and	<ul style="list-style-type: none"> • As at the starting point (to allow direct comparison)

Items	Information
situation at the end point:	
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> • Observe information and database catalogue of the forest survey and inventory department under the Directorate of Forestry • Enquiries with both public (central and state levels and development partners) and private prospective users of information
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> • Internal monitoring and evaluation of the Ministry and Directorate of Forestry • External monitoring and evaluation: a government/stakeholder forum for forestry subsector development • For broad management plans, external monitoring and evaluation: a government/stakeholder forum for forestry subsector development (support from IUCN and National Herbarium in case of biodiversity-focused management plans)

2.7 Required human resources

(1) Principle of human resources management:	<p>Management level oversight over project; in addition:</p> <ul style="list-style-type: none"> • Gender-sensitive but competency/merit-based selection of counterpart staff (already competent or with good prospects of quick learning) • Assignment of technically competent personnel and juniors able to learn • Efficient and effective engagement of consultants and specialists outside of the government: all external experts to have a trainable counterpart • Sufficient staffing for regular database maintenance and provision of analytical and information services
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> • Full time Senior level officer to lead team • Two GIS specialist for GIS work supervision (one junior and one middle level) • One remote sensing specialist (middle level) • One surveyor and assistant, one inventory technician and assistant (for survey supervision (each team of one junior and one middle level) • Database manager (middle level) and information-dissemination assistant (lower level) • Land dispute mitigation officer (middle level) • Full time leader of broad management planning • Others as suggested under 2.2(1)
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Consultants/short-term teams:</p> <ul style="list-style-type: none"> • Technical experts (One senior and two middle level experts) • Two GIS specialists (one junior and one middle level) for analysis and data generation • One remote sensing specialist (middle level) for analysis and data generation • Database adviser • Three field teams: technicians, assistants and enumerators/labourers (as needed to suit field workload)

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	<table border="1"> <tr> <td>M</td> <td>L: Low</td> <td>M: Medium</td> <td>H: High</td> <td>(select an indicator from the list)</td> </tr> </table>	M	L: Low	M: Medium	H: High	(select an indicator from the list)
M	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	<ul style="list-style-type: none"> • Implementation of the project itself faces very low risk. • The outputs of the project are crucial for defusing conflict over natural resources and so reduce risks to the resource. For example, land demarcation between public forest reserves and private or communal land can provide a professionally defensible basis for negotiation so permitting transparency in settlement of disputes. • There can also be conflicts between sectors (cropping or livestock vs. forests) or opportunities for sectors to share resources (e.g. grazing in reserves) for which information on carrying capacity is important for planning and negotiation. 					

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	<ul style="list-style-type: none"> • Some high technology is used in this project; it is important to allow for adequate training and duration of the project. In addition to the on the job training, however, the ID sector should also provide for long-term university level education for a few specialists. Exact needs to be worked out during implementation of this project. • The focus of this project is deliberately on general and plantation resources and on their potential for wood production. Some Development Partners (especially USAID, SNV, FAO) are already assisting with considerable survey/inventory work on Gum acacia (<i>Acacia Senegal/seyal</i>) and on Shea (<i>Vitellaria paradoxa</i>) resources. • For management plans: no management plans should be set in concrete but there must be clear protocols regarding circumstances under which amendments can be made and who authorises.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<ul style="list-style-type: none"> • Maintenance and analysis of the database and provision of information to concerned parties whether free of charge or at cost. Remote-sensing cover must be updated every 5 years to track trends; air photo cover every 10 years perhaps – these will need interpretation. Pricing schedule of information must be set carefully. • Updates of broad perspective (long-term) management plans and priorities (including suggested priorities for additional reserves) must be available every 5 years. <p>Required human resources for routine operations are:</p>
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Items	Information
	<ul style="list-style-type: none"> • Department head (a senior-level officer) • Two GIS specialists for GIS work supervision(one junior and one middle level) • Two teams to carry out surveys (1 supervisor and 5 assistants each) • Two teams to undertake inventory activities (1 supervisor and 5 assistants each) • A database manager and information-dissemination junior • One land dispute mitigation officer (middle level) • One management plans leader and 4 staff (2 degree; 2 diploma)

Part 3: Project cost estimation

Project duration	SSP/USD = 4																													
	% to																													
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	Total				
1 Management and operation of project	42,107	47,393	48,307	48,340	47,373	46,549	43,126	43,126	42,592	42,592	42,592	42,592	42,592	42,592	42,592	42,592	42,592	42,592	42,592	42,592	42,592	42,592	42,592	42,592	42,592	1,090,371	272,593	99%		
1 Deployment of government staff	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	6,835	1,709	1%	
1 National government officers' travel cost to state and CFRs	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	922	230	0%	
2 National government officers' travel cost to state and CFRs	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	922	230	0%	
3 Local government officers' travel cost to Juba	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	1,152	288	0%	
4 Local government officers' travel cost to Juba	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	3,840	960	0%	
2 Procurement of administrative services (contracted)																														
3 Procurement of professional services (contracted)	3,423	3,423	3,423	3,423	3,423	3,423	3,423	3,423	3,423	3,423	3,423	3,423	3,423	3,423	3,423	3,423	3,423	3,423	3,423	3,423	3,423	3,423	3,423	3,423	3,423	3,423	17,115	4,279	2%	
1 Technical expert (senior level)	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	2,400	600	0%	
2 Technical expert (two middle level)	840	840	840	840	840	840	840	840	840	840	840	840	840	840	840	840	840	840	840	840	840	840	840	840	840	840	4,200	1,050	0%	
3 GIS specialist (middle level)	420	420	420	420	420	420	420	420	420	420	420	420	420	420	420	420	420	420	420	420	420	420	420	420	420	420	2,100	525	0%	
4 GIS specialist (junior level)	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	1,500	375	0%	
5 Remote sensing specialist (middle level)	420	420	420	420	420	420	420	420	420	420	420	420	420	420	420	420	420	420	420	420	420	420	420	420	420	420	2,100	525	0%	
6 Database advisor (senior level)	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	2,400	600	0%	
7 3 field teams: Technicians	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	525	131	0%	
8 3 field teams: Assistants	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	450	113	0%	
9 3 field teams: 3 enumerators	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	1,350	338	0%	
10 3 field teams: 3 labourers	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	90	23	0%	
4 Implementation of staff training	1,068	1,092	825	558	534	534	534	534	534	534	534	534	534	534	534	534	534	534	534	534	534	534	534	534	534	534	5,145	1,286	0%	
1 Diploma level training in local institutions: 3 persons 2 years				24	24																							72	18	0%
2 Tuition for diploma level training in South Sudan	801	801	801	801	801	801	801	801	801	801	801	801	801	801	801	801	801	801	801	801	801	801	801	801	801	801	801	2,403	601	0%
3 Diploma level training abroad: 3 persons 2 years																														
4 Per diem (living expenses)																														
5 Transportation for a round trip																														
6 Tuition for diploma level training abroad																														
7 Undergraduate degree-level abroad: 2 persons 4 years																														
8 Per diem (living expenses)																														
9 Transportation for a round trip																														
10 Tuition for undergraduate level training abroad																														
11 Postgraduate abroad: 1 person 2 years																														
12 Per diem (living expenses)																														
13 Transportation for a round trip																														
14 Tuition for undergraduate level training abroad																														
5 Implementation of research, studies and surveys	42,107	42,607	43,307	43,607	42,907	42,107	42,107	42,107	42,107	42,107	42,107	42,107	42,107	42,107	42,107	42,107	42,107	42,107	42,107	42,107	42,107	42,107	42,107	42,107	42,107	42,107	1,056,676	264,169	96%	
1 Nationwide coverage of satellite photographs (GeoEye etc.)	6,144	6,144	6,144	6,144	6,144	6,144	6,144	6,144	6,144	6,144	6,144	6,144	6,144	6,144	6,144	6,144	6,144	6,144	6,144	6,144	6,144	6,144	6,144	6,144	6,144	6,144	153,600	38,400	14%	
2 Classification of forest and land use types by remote sensing	512	512	512	512	512	512	512	512	512	512	512	512	512	512	512	512	512	512	512	512	512	512	512	512	512	512	12,800	3,200	1%	
3 Nationwide coverage of aerial photography and digitising	4,096	4,096	4,096	4,096	4,096	4,096	4,096	4,096	4,096	4,096	4,096	4,096	4,096	4,096	4,096	4,096	4,096	4,096	4,096	4,096	4,096	4,096	4,096	4,096	4,096	4,096	102,400	25,600	9%	
4 Establishment of nationwide ground control points	560	560	560	560	560	560	560	560	560	560	560	560	560	560	560	560	560	560	560	560	560	560	560	560	560	560	14,000	3,500	1%	
5 Preparation of nationwide ortho-photos at 1/10,000	12,288	12,288	12,288	12,288	12,288	12,288	12,288	12,288	12,288	12,288	12,288	12,288	12,288	12,288	12,288	12,288	12,288	12,288	12,288	12,288	12,288	12,288	12,288	12,288	12,288	12,288	307,200	76,800	28%	
6 Preparation of nationwide topographical map at 1/50,000	17,408	17,408	17,408	17,408	17,408	17,408	17,408	17,408	17,408	17,408	17,408	17,408	17,408	17,408	17,408	17,408	17,408	17,408	17,408	17,408	17,408	17,408	17,408	17,408	17,408	17,408	435,200	108,800	40%	
7 Boundary surveys for all existing CFRs (1,869km)	299	299	299	299	299	299	299	299	299	299	299	299	299	299	299	299	299	299	299	299	299	299	299	299	299	299	7,476	1,869	1%	
8 Inventory of 50,000ha of CFRs (plantation and natural forests)	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	20,000	5,000	2%	
9 Establishment of natural forest resources database																												2,000	500	0%
10 Development of broad CFR and SFR forest management plan	500	700	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	2,000	500	0%	

4.4.13 Forest policy and legal framework establishment and maintenance project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Forestry		
(2) Project name:	Forest policy and legal framework establishment and maintenance project		
(3) Project ID:	03.13	01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development	
(4) Start and ending fiscal year:	Starting FY: 2015/16	Ending FY: 2024/25	Duration (years): 10
(5) Total investment:	SSP 2,983,000	USD 746,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FO.SA1	Policy and Legal framework development	Table 2-3
(2) Government organisation:	07	MAF-FO	Directorate of Forestry	Table 2-6
(3) Activity types:	101	ID-LI	Institutional Development – legal and institutional development	Table 2-12
	104	ID-IM	Institutional Development – implementation and monitoring	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	X
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	X
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
93	EE	Eastern Equatoria State	X	
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	X
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income		

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

Policy and Legal Framework Functions:

Forests have productive, protective and social functions, otherwise often expressed as: economic (goods and services); environmental (especially protective roles over land, water, biological reaches and as habitat for wildlife) and social functions (livelihood and cultural roles for communities, recreation etc even in urban settings). An ideal policy and arrangements for its implementation needs to refer to all these dimensions, although clearly some prioritisation is needed as no country ever has the capacity to give adequate attention to all aspects.

In February 2013, the full Council of Ministers (Cabinet) approved the South Sudan Forest Policy, which has now been submitted to the National Assembly for adoption. The Policy Statements in the policy are reproduced in the Annex; it is apparent that in scope, the South Sudan policy is about as complete as similar documents in other countries and is an adequate basis for moving forward. Among the functions of forests mentioned earlier, however, the Policy lacks specific statements about social functions of forests even though the underlying analysis refers to them. The Policy pays a lot of attention to institutional arrangements and bodies for its execution, including proposed establishment of an income-earning parastatal Forest Commission and a Forest Fund.

With the Forest Policy document nearing Parliamentary adoption, this project will be launched in the presence of a suitable organising framework. The justification for this project on policy and legal framework for forests is that South Sudan needs to elaborate arrangements for effectively using the organising framework for its forests otherwise they could be threatened by uncontrolled access and use: indeed, the policy document estimates “. . . that some 45% of forest cover and a large proportion of biodiversity has been lost since the outbreak of the last liberation war in 1983”. Wanton cutting of valuable teak established painstakingly and at considerable sacrifice a long time ago; deforestation of natural vegetation in many other areas; cutting down of even traditionally valuable trees such as gum Africa/gum acacia are all manifestations of how easily things could go wrong. The impacts of such acts are costly to reverse and often are not fully capable of solution.

Given this awareness of the dangers forests face, it is no surprise that a key ambition of the Forest Policy is to achieve 20% of land being covered by forests. Given that if both non-reserved and reserved forests and woodlands are counted, forest cover currently (2014) exceeds 20%, this 20% “goal” may have to be considered the minimum expanse of reserved forests government will aim to achieve if non-protected forests were to all disappear. The other thrusts expressed in this policy and its strategies and implementation instruments will necessarily reflect societal and political preferences.

The justification for this project is that it can advise on how well the Policy fulfils the economic, environmental and social functions; how to best implement the policies and associated legislation/regulations that do exist; proposing any modifications or implementation instruments (regulations, incentives, sanctions) needed, subject to capacity and resources, and helping to steer them through approval processes; and building capacity for future tracking of implementation, need for adjustment and implementation/enforcement.

Backing up the New Policy with Laws and Regulations:

At the same time as launching a new Forest Policy into the approval pipeline, South Sudan also had a Forests Bill (2009) which awaits enactment, presumably to succeed the “Forests Act 1989” from the unified Sudan days. This Act is supported by implementing regulations, of which an example for national forest reserves is the Central Forest Ordinance. South Sudan will need many more ordinances and other implementing regulations to implement its new Forest Policy when adopted. This project will act on several fronts in this endeavour:

- Look again at the Forests Bill to see that there is adequate match with the Forest Policy – assist with any revisions and with re-entry into the approval pipeline for enactment;
- Revision of existing regulations (such as the ordinance mentioned earlier) to ensure that all key policy statements and their corresponding articles in the new law also have implementing regulations;
- Contribute to modernisation of the guiding philosophy for forest policy and law, which currently focuses only on “control, prohibitions and penalties” by adding to it “incentives”; and
- With a view to keeping the policy process open to adjustment that enjoys broad societal approval, link the activities on updating the Forest Bill and formulation of its

Items	Information
	<p>implementing regulations (including incentives) to the stakeholder forum which the same project will host and provide a secretariat to.</p> <p>To facilitate follow up in the above process, the Annex lists key Forest Policy 2013 statements alongside corresponding sections of the Forests Bill 2009.</p> <p>A Forum for Stakeholder Interaction:</p> <p>It is a globally demonstrated reality that the fate of forests is determined at least as much – and often more - by policies and developments outside the sector as inside it. This will apply in South Sudan too and the prosperity of the sector will therefore need a forum (which this project will host) in which forests are viewed in the context of overall land use; alongside potential competing or synergistic land-using sectors or resources such as wildlife management, tourism, human settlements and water; and taking account of macro developments in sectors such as roads and rural power. Such a forum can not only help prioritise areas of intervention and the appropriateness of implementation instruments but also champion selected interventions that are agreed upon.</p> <p>The ideal would be if the country already has a land tenure framework, with policy and set of procedures that are accepted by all; but in the case of this not being so, the forum can help contribute to its establishment.</p> <p>It is worth recalling that after decades of interrupted development, displacement of communities from their ancestral lands and interruption of legal processes governing natural resource use (including forests) normal perceptions of rights and responsibilities need to be built up again. This requires fora for exchange of information and views and for arriving at shared values, goals, priorities and institutional arrangements for taking action and for promoting compliance with agreements.</p> <p>The design of fora under the project should be such as to involve all key stakeholders and communities to secure their inputs into priority-setting and into all main interventions that require knowledge of diverse viewpoints. Gender balance and the views of special interest groups, such as youth or the commercial/entrepreneurial class, should be assured space. Stakeholders responsible for alternative land uses to forestry should also have room to be heard, as well as government departments with oversight development responsibility (internal affairs, local government). There is need for government and civil society presence to be balanced; a need also within “civil society” for the interests of commercial entities to balance with those of a non-profit nature, such as environmental advocacy organisations.</p> <p>This project aims to establish such a forum process, which should ideally have a pyramidal structure starting and being driven by local community consensus-building but going up through (as appropriate) traditional and official institutional structures to a national apex. It goes without saying that tension, even where it does not lead to open conflict or war, is not conducive to effective developmental progress. The justification of this project, which is to support the whole forestry projects portfolio in the context of attention to all land-based natural resources, is that it can anticipate areas of challenge in achieving consensus. It can promote harmony of ambitions and it can offer peaceful ways to prevent conflict or at least moderate its severity. As a result, the project is an essential underpinning for easy implementation of many other projects.</p>
(2) Objectives:	<ul style="list-style-type: none"> • To help launch implementation of the 2013 Forest Policy after its Parliamentary adoption • To clarify priorities in implementation of the Policy Statements and to help develop the implementation strategy and instruments for them (Update and adjust existing Forest Bill; prepare regulations, incentives) • To help develop mechanisms for effective and synergistic interaction with other sectors, especially those that are also based on land • To support application of the strategy and implementation instruments • To provide a forum for stakeholders to influence policy, strategy and implementation instruments as well as to collectively champion their timely enactment in law and implementation • To build capacity at national level and partly at state level for policy work and its implementation.
(3) Overall description including temporal and spatial extent of project:	<p>This “<u>Forest policy and legal framework establishment and maintenance project</u>” is to start as soon as possible (2015/16) and to run for 10 years. It will be governed by and set its work priorities by the decision already taken to retain 20% of land cover under forests. The project is, by definition, national in scope. The Forest Policy calls for establishment of a Forestry Commission: this high-level action is best done under the Institutional Development (ID) sector of CAMP; but the “software” elements, including feasibility study, should be provided by project “<u>Forestry institutional and human resources capacity development</u>”, given that they are of a sectoral / professional nature.</p>

Items	Information
	<p>The first task should be to secure clarification of the ambition to achieve 20% land cover by forests. As explained in the profile for one community forestry project (Community forestry, agroforestry and smallholder plantations development), in South Sudan the combination of forest reserves, protected areas, national parks and game reserves together covers an estimated 19,500km², which is just over 9% of the tree-covered land area, so leaving 91% of trees not formally protected by government. In actual area, there are at least 203,730km² of trees and around 257,236km² of shrubs outside protected areas. The ambition of the forest policy appears to be to retain far less forest cover than the country currently has. This means that government is resigned to much more forest loss before it gets really concerned – the project will need to establish whether this means government interventions will not include extending assistance to help sustainably manage and get the best out of the non-reserved forest which is much greater than that already reserved or likely to be additionally reserved.</p> <p>A second task would be to clarify and propose implementation adjustments, given the fact that the Forest Policy has no policy statements highlighting social functions. The need is not for insertion of a specific policy statement but for ensuring that institutional agendas include adequate attention to key social functions, especially for rural communities. The third task would be (in a consultative fashion) to assist the government prioritise among the many areas of Forest Policy interest, whose implementation will be supported by other proposed CAMP projects. Such implementation will require a sound combination of “carrot” and “stick” approaches, i.e. the adaptation of existing instruments or formulation of suitable new incentives and deterrents/sanctions, to be reflected in adjusted laws and/or regulations.</p> <p>The most substantive part of the work will be to arrange for adapting the drafted Forests Bill 2009 so as to best match the new Forest Policy (see Annex), to prepare implementing regulations (both incentives and sanctions) and to push them through the approval process. It is suggested that the legal, regulatory/incentives and other actions under the above areas ensure that South Sudanese forests quickly demonstrate (a) ability to offer economic opportunities that contribute to generating sustainable prosperity; (b) provide significant environmental services, including critical protection of land, water and biodiversity resources all consistent with measures for climate change mitigation and adaptation; and (c) serve strongly-felt social needs for livelihoods and cultural roles of forests. To this end, the economic choices for forests must also help the social improvement agenda.</p> <p>There are two cross-cutting areas of action, which will support all the above interventions:</p> <ul style="list-style-type: none"> • capacity-building for work on policies and laws as well as strategies and regulations/incentives for their enforcement and implementation. This should include general strengthening of administrative capacity and ability to involve other government organisations (e.g. law enforcement agencies). A challenge in capacity-building at state level is that there is no obvious match at present between the size/strength of the forestry team and the significance of forests in each state. • establishing a stakeholder natural resources forum: the forum would take up matters of forestry mostly in their land use context and alongside use of other natural resources. Given that forests are influenced by many policies outside the sector (including that they share land with other sectors), this forum would assist government develop arrangements and procedures for inter-sector information-sharing, consultation and other clearing-house functions so that synergies are strengthened and tensions and conflicts are minimised. The project will participate in a deliberate process of identifying and correcting possible sources of conflict and mismatch in all key laws, regulations and procedures related to interfacing sectors. <p>A Forum for Stakeholder Interaction:</p> <p>The natural resources forum would identify pressing topics requiring dialogue, establish and formalise structures for consultation, develop ways to follow up consultative agreements with decision making by appropriate parties, and provide feedback so as to encourage faith in the consultative activities. The forum must be active at all levels: starting with the grassroots (both traditional and official structures), it should also operate at boma, payam, county and state levels, before converging to an apex at national level. At this last level, deliberate arrangements should be made for interface with decision-makers in government whose follow-up needs to be timely and should feed back to the lower levels. Participation may at times focus on the commercial private sector although local community representatives from the areas where the private sector operates must be present. Similarly, where focus is on the general society, the private sector active in the area needs to be present so that matters affecting it are not omitted inadvertently.</p>

Items	Information
	<p>Among possible areas where tension may arise affecting forestry development, the following can be highlighted, to be defined in greater detail at full project formulation stage and to take full account of the different ways in which any decisions may affect men and women, mature members of society and the youth:</p> <ul style="list-style-type: none"> • Disputes related to land: <ul style="list-style-type: none"> a) What to choose if forestry land use conflicts with alternative land uses e.g. for cropping or livestock or settlement What form of forestry to pursue – e.g. plantations, conservation, mixed land use • Disputes over benefits: <ul style="list-style-type: none"> a) Ownership of forest e.g. state, local and National governments Usufruct harvest rights (right to use without ownership) of locals over certain traditional forest products e.g. fuelwood, charcoal, some Non-Timber Forest Products (NTFPs), grazing of animals in the forest etc Transit or other rights of traditional communities or their livestock on land now allocated to forests Settlement of communities on land designated to forest Sharing of income from forests with local communities Payments or social investments by companies to local communities or provision of facilities (clinics, schools etc) in their neighbourhood Employment of locals vs. outsiders (foreign or from elsewhere in South Sudan) in investment areas Sharing of taxation revenues: among central, state, county and , traditional authorities • Division of responsibilities: <ul style="list-style-type: none"> a) Roles of state and county governments e.g. protecting and managing forest Roles of traditional leaders and local communities, e.g. in protecting neighbouring forests Rights of stakeholders to being consulted or otherwise involved Management of private sector or government abuses: e.g. disrespect for boundaries, or exploitation by traders.
(4) Component structure:	<p>Component 1: Development of legal, incentive and regulatory instruments to implement the new forest policy and National and State level prioritisation and support to their application.</p> <p>Component 2: Drafting or adjusting existing drafts of the Forests Bill 2009 and all necessary implementing regulations for putting the Forest Policy into effect.</p> <p>Component 3: Renewable natural resources management forum.</p> <p>Component 4: Capacity-building for policy, legal, incentive and regulatory functions.</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs	<p>Component 1: Development of legal, incentive and regulatory instruments to implement the new forest policy and National and State level prioritisation and support to their application</p> <p>Activity 1: Confirmation of government intentions under the 20% land cover goal with definition of options for government interventions for the larger forests outside reserved forests and clarification of policy intent on social functions of forests.</p> <p>Output: Official statement defining the 20% goal; Report of inter-departmental consultation of proposed government actions for forests outside reserves (lead role Agroforestry and Forestry Extension Department); Report of inter-departmental consultation of proposed government policy intentions on social functions of forests</p> <p>Activity 2: Prioritisation and clarifying linkages among the many Policy Statements in the Forest Policy.</p> <p>Output: Consultation-based report on Forest Policy implementation priorities and linkages, in the context of national development planning; In line with agreed priorities, Work Plan for project on adjustment of laws, new laws; strategy, regulations and incentives/sanctions</p> <p>Activity 3: Inter-sectoral consultations and development of effective mechanisms and procedures for greater policy synergy and reduced incidence of tension/conflict.</p> <p>Output: Report giving proposals for improved mechanisms and procedures, with focus on land-using sectors but could include others, e.g. trade.</p> <p>Activity 4: Integration of policy priorities into projects portfolio.</p> <p>Output: Based on outputs of Activities 1 and 2, prepare a consultation-based report on any adjustments to CAMP and other projects to better fit Forest Policy priorities</p> <p>Component 2: Drafting or adjusting existing drafts of the Forests Bill 2009 and all necessary implementing regulations for putting the Forest Policy into effect.</p> <p>Activity 5: Review Forests Bill 2009 to see that there is a satisfactory match with the Forest Policy – assist with any revisions and with its re-entry into the approval pipeline for early enactment.</p> <p>Output: Updated draft Forests Bill approved</p> <p>Activity 6: Revision of existing regulations and preparation of additional ones to ensure that all key policy statements and their corresponding articles in the new law also</p>
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Items	Information
	<p>have implementing regulations. Output: Updated regulations and additional ones matching Policy Ambitions into approval pipeline</p> <p>Activity 7: Modernise approach of Forest Policy implementation by complementing historical reliance only on control, prohibitions and penalties by adding regulations that stress incentives. Output: Drafting and securing approval of a set of incentive regulations (with safeguards to avoid abuse) for key provisions of the Policy and the updated Forests Act</p> <p>Component 3: Renewable natural resources management forum Activity 8: Definition of priority challenges and opportunities to be reflected in forum agendas: (a) at national level; (b) by livelihood/geographic zone; (c) under specific projects including matters of a localised nature¹⁵⁵; selection of pilot states, scheduling and work planning of consultations and development of approaches to consensus-building. Output: flexible agenda with indicative contents at all levels; flexible and prioritised workplan.</p> <p>Activity 9: Piloting of state and sub-state level dialogues and trials of linking modalities to national apex level and with decision-makers at state and national levels) Output: Report on process performance</p> <p>Activity 10: Promotion of interfaces with decision-makers to facilitate follow-up to forum activities and testing of feedback routines. Output: a tested set of proposed procedures</p> <p>Component 4: Capacity-building for policy, legal, incentive and regulatory functions Activity 11: Review of organisational arrangements, capacity and training needs for the new Forestry Commission and for Forest Policy work in general (from policy reform to implementation instruments) and proposals for improvement Output: Report on institutional reforms, with focus on the ministry, the Forestry Commission and corresponding state-level units; Report on training needs and prioritised programme for training</p> <p>Activity 12: On-the-job training at national and state levels. Output: more skilled staff/assistants</p> <p>Activity 13: Long-term formal training (excluding needs for prospective Forestry Commission). Output: Guesstimates: 2 staff at degree level (local) 2 degree level (overseas); 10 diploma level, 2 national and 8 from the states (in Eastern /Southern Africa); 10 clerical/administrative staff</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<ul style="list-style-type: none"> • Forestry Directorate: Administration and Finance Department [and especially for “Forum”, in cooperation with Forest Economics and Programme Department] • Ministry of Agriculture Central Administration • CAMP/IDMP Implementation Coordination Task Team (ID section)
(2) Description of beneficiaries within the framework of the project:	<ul style="list-style-type: none"> • The Forestry Directorate, especially the Administration and Finance Department and especially for “Forum”, in cooperation with Forest Economics and Programme Department. • Forestry Units in all states • Ministry of Agriculture – in having a tension-reducing forum for dialogue on land matters • Land commission e.g. National and state • Natural resources working group of Development Partners • Private investors with interests potentially threatened by community disputes.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<ul style="list-style-type: none"> • Support measures for the new Forest Policy and improved environment for interventions to be effective. • From Forum: information sharing, consensus on opportunities, priorities and resolution/avoidance or attenuation of tensions and conflict • Impact: eventually, better managed sector.
(2) EIRR and/or FIRR, and/or other economic analysis:	To be done at detailed formulation of project

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td> Negative: a Positive: c </td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society </td> </tr> </table>	Negative: a Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society
Negative: a Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society		

¹⁵⁵ To feed into lower-level forum activities.

Items	Information
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>d: will have a significant impact on the environment and/or society</p> <p>(Positive)</p> <ul style="list-style-type: none"> • This project will improve the capacity of the whole forestry programme (including the CAMP interventions) to be more effective in all types of forest functions (economic, environmental, social), by making policy implementation, and institutional arrangements for it focused and clear. • Introducing greater reliance on incentives than punishments and sanctions is expected to release energy for action that is beneficial to society (due to greater investment) and the environment. • Forum: Information sharing, consensus building among all stakeholders, both male and female, and conflict management are important parts of the steps to ensure responsible management of resources, including from the environmental perspective. • Post-Rio Summit forestry laws and policies place human wellbeing at the core of all development and stress balanced attention to economic, environmental and social (including gender equity) functions of forests.

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • Laws, regulations, incentives and prioritised policy implementation strategy for new Forest Policy • Level of coordination with other policies affecting forestry • Staff numbers by level of training for policy work • Stakeholder forum in place and operational at all levels from centre to decentralised levels: <ul style="list-style-type: none"> a) Benefits of conflict avoidance and consensus building to seize opportunities or avoid problems does not have easily measurable indicators Frequency of meetings is no guarantee of success Qualitative observation of reduced tensions/conflicts may be nearest to useful indicator.
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • Unchanged: look at changes relative to the starting point (to allow direct comparison)
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> • Surveys • Checking documentation
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> • Ministry of Agriculture management (supported by Forestry Directorate management) • Review/Evaluation Missions, including government/development partner periodic progress-review missions • Forum: <ul style="list-style-type: none"> a) Land commission, and ministry of environment Natural Resources Working Group (NRWG) of Development Partners

2.7 Required human resources

(1) Principle of human resources management:	<ul style="list-style-type: none"> • Gender-sensitive but competency/merit-based selection of counterpart staff (already competent or with good prospects of quick learning) • Assignment of technically competent personnel and juniors able to learn • Efficient and effective engagement of consultants and specialists outside of the government: all external experts to have a trainable counterpart • Sufficient staffing • For Forum: Assignment of personnel with suitable personality and ability to interact at many levels
(2) Required human resources in the public sector (Positions, grades and numbers):	<p>Policy-related work requires people of significant experience and diverse exposure as advisors:</p> <p>Long-term staff - Management level oversight over project; in addition:</p> <ul style="list-style-type: none"> • Full time Senior level adviser to lead team (an expatriate could be best initially) • National counterpart team leader • 2 Policy and Strategy Analysts (graduates) Lead Trainer (to also do assessment of needs) • For Forum: <ul style="list-style-type: none"> a) full time national manager of the process, with suitable personality. Senior level officer to lead team: preferably an economist to also determine rates of return and to carry out cost/benefit and other analyses state-level counterparts to national manager in selected pilot states
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Paid consultants/short-term teams:</p> <ul style="list-style-type: none"> • Formulators of specific regulations and incentive packages (consultants) • Other consultant technical advisors <p>Voluntary:</p> <ul style="list-style-type: none"> • Counterparts for government staff to interact with. Could be based in civil society organisations (gender-balanced) and commercial private sector chambers/associations

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	<table border="1" style="width: 100%;"> <tr> <td style="text-align: center;">M</td> <td style="text-align: center;">L: Low</td> <td style="text-align: center;">M: Medium</td> <td style="text-align: center;">H: High</td> <td style="text-align: center;">(select an indicator from the list)</td> </tr> </table>	M	L: Low	M: Medium	H: High	(select an indicator from the list)
M	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	Implementation of the project itself faces risk from likelihood of staff having limited					

Items	Information
	<p>experience in work on policy, design of strategies and regulations/incentives. For Forum:</p> <ul style="list-style-type: none"> • If mishandled, a forum process could exacerbate conflict or tension • Views of the local stakeholders may be ignored • Politicians may influence the forum to serve interest of certain groups • Danger of decision makers not agreeing with or not acting on strongly-felt desires that have been agreed upon by forum stakeholders – these can stoke tension.

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	<ul style="list-style-type: none"> • Crucial that all states are fully briefed about plans and intentions • A forum process should not promise more than it can deliver: a way must be built in for officials guiding it to be familiar with what expectations are realistic.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<ul style="list-style-type: none"> • With upgraded staff capacity and institutional arrangements, government should be able to continue all the project starts
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Part 3: Project cost estimation

Project duration	SSP/USD = 4												Total	% to total														
	Phase 1			Phase 2			Phase 3			Phase 4																		
Cost group	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000	% to total	
1 Management and operation of project	1,214	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	2,983	746 100%	
1 Deployment of government staff																												
2 Procurement of administrative services (contracted)	1,134																									1,134	284 38%	
1 International consultant (legal draft)	378																										378	95 13%
2 Local consultant (legal draft)	302																										302	76 10%
3 International consultant (forest incentive)	252																										252	63 8%
4 Local consultant (forest incentives)	202																										202	50 7%
4 Implementation of staff training	80	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	1,849	462 62%	
1 Meetings for legal development (per diem)	30																										30	8 1%
2 Meetings for legal development (transportation)	50																										50	13 2%
3 National level forum at Juba (per diem)	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	608	152 20%
4 National level forum at Juba (transportation)	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	675	169 23%
5 State level forum at state capitals (per diem)	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	243	61 8%
6 State level forum at state capitals (transportation)	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	243	61 8%
5 Implementation of research, studies and surveys																												
6 Delivery of extension and training services to the private sector																												
7 Operation and maintenance																												
2 Construction of infrastructure and procurement of equipment																												
1 Construction of office buildings																												
2 Construction of research, training and other specialized buildings																												
3 Construction of feeder roads																												
4 Construction of production, market and transportation facilities																												
5 Acquisition of land																												
6 Procurement of vehicles																												
7 Procurement of equipment																												
3 Subsidies, equity and loans																												
1 Provision of cash and/or in-kind subsidies																												
2 Provision of training services to the private sector																												
3 Equity investments																												
4 Provision of loans																												
5 Social assistance/donation (Emergency)																												
Total (SSP '000)	1,214	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	197	2,983	100%	
Total (USD '000)	304	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	746		
% to total	41%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	100%		

Public sector project
Routine work by government
Private sector project
Routine work by private sector

4.4.14 Forestry institutional and human resources capacity development project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Forestry		
(2) Project name:	Forestry institutional and human resources capacity development project		
(3) Project ID:	0 3 1 4 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2015/16	Ending FY: 2034/35	Duration (years): 20
(5) Total investment:	SSP 39,250,000	USD 9,812,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FO.SA2	Public Sector Institution and Management Capacity Development	Table 2-3
(2) Government organisation:	07	MAF-FO	Forestry Directorate: Administration and Finance Department	Table 2-6
	07	MAF-FO	State-level equivalent organisation	Table 2-6
(3) Activity types:	102	ID-AD	Institutional Development – administrative capacity development	Table 2-12
	104	ID-IM	Institutional Development – implementation and monitoring	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	X
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	X
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	X
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	X
(6) Livelihood Zone:	01	EFPP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	X
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>South Sudan is a young country. In forestry, as in any other sector, it has ambitions to create the ideal institution to deliver perfect developmental and social services. But in the pursuit of such perfection, immediate actions for development must proceed, and for this, institutional capacity sufficient for the next step ahead should be put in place. This project aims to provide this essential capacity – enough to implement the first projects being developed while also laying the groundwork for more holistic institutional capacity.</p> <p>The project “<u>Establishment of a forest research institute for South Sudan</u>” is an example of creating capacity to generate knowledge. South Sudan also needs capacity to implement its development programme, its training ambitions, and to support private sector investments in forestry. The government is about to adopt a new Forest Policy and with it will come establishment of a Forestry Commission, new strategies, laws and regulations and/or incentives for policy implementation. Capacity to do this must start being developed now.</p> <p>At the core of such capacity is human resources; therefore training is a critical element, of which much is on-the-job learning (built into each project) and some is formal, both in South Sudan (domestically at the Kagelu Forestry Training Centre and at the University of Juba) and abroad.</p> <p>Much generic formal training, especially long-term training, falls under the Institutional Development (ID) sector of CAMP. This project will take up what is more forestry specific and short-term.</p>
(2) Objectives:	<ul style="list-style-type: none"> • To review, with the intent to reform, the existing structures and operational efficacy of the Forestry Directorates and corresponding State-level units as the system transitions to a Forestry Commission called for by the new Forestry Policy. • To assess institutional and human resource capacity, propose improvements and support implementation of corrective action. • To initiate training for sector professionals, technicians and workers and draw attention of the ID sector to broader training needs. • To extend physical facilities of the Kagelu Forestry Training Centre in Yei to accommodate short courses and also to have scholarships for longer-term training.
(3) Overall description including temporal and spatial extent of project:	<p>This institutional and human resources project would be among the earliest to start (2015/16) and the longest-lasting (a total of 20 years). The description here is for a first phase, say for the first 5 years. The long duration of the project should be taken advantage of to address things that take time to adjust, among which the question of gender balance must be included. It will be important to start looking at capacity using disaggregated data for gender, for age, and for other attributes government may value, provided that the prime criterion in capacity building remains merit.</p> <p>For this project, a practical basis for selecting what to focus on in institutional and human resources capacity development is to look at immediate needs as reflected in the areas of intervention of the projects. A broad clustering of the projects arrived at during the Technical Team meeting of 28 to 30 October 2014 (below) offers the basis for types of institution-building that may be needed and is reflected in the type of training suggested in section 2.3(2) “Components/Activities”. This can take the country forward in practical ways and, as it develops, it can take further steps towards the ideal institutions.</p> <p>The numbers are modest and they take account of expected difficulties in releasing a lot of people at the same time from a limited pool of educated manpower in a small sub-sector:</p> <p>Policy and Planning:</p> <ul style="list-style-type: none"> • Forest policy and legal framework establishment and maintenance • National forest resources inventory and information management • Development of forest management plans • Review of government and DP rural road and power plans and progressive estimation of forestry’s additional requirements (leave largely to Institutional Development (ID) sector) • Mainstreaming “Green-Economy” practices into forestry, forest industries and forest-based tourism • Forestry sector project preparation and sawlog plantations grant facility fund <p>Sector Institutions and Administration:</p> <ul style="list-style-type: none"> • Forestry institutional and human resources capacity development • Establishment of the South Sudan Forest Research Institute (sharing responsibilities with ID)

Items	Information
	<p>Forest Resources Management: Management by Government or Commercial Private Sector</p> <ul style="list-style-type: none"> • Multipurpose Management of Forest Reserves project • Industrial-Scale Forest Plantations development for log production • Integrated upscaling of industrial and outgrower tree plantations and expansion of wood processing for export (a phase II project integrating tree growing with processing) <p>Forest Management through Participatory Approaches</p> <ul style="list-style-type: none"> • Participatory establishment and management of forest reserves • Community forestry, agroforestry and smallholder plantations development (including development of selected non-timber forest products) <p>Forest Products (Industries and Trade) Development:</p> <ul style="list-style-type: none"> • Market development and promotion for commercial forestry wood products project • Fuelwood and Charcoal Value Chains - sustainable production and efficiency improvement • Development of industrial processing and manufacturing of timber products <p>Forest-based Recreation:</p> <ul style="list-style-type: none"> • Forest-based tourism development project
(4) Component structure:	<p>Component 1: Institutional review of operational efficacy for the national and state forestry administration arrangements and capacity for transition to the South Sudan Forestry Commission</p> <p>Component 2: Technical support to establishment of the South Sudan Forestry Commission including its feasibility study.</p> <p>Component 3: Advisory services to Forestry Policy, Planning and Administration</p> <p>Component 4: Study of medium-term human resources development needs, competencies and gaps</p> <p>Component 5: Implementation and coordination of forestry-related training (a) on the job training programmes (b) development of short-courses capacity at Kagelu Forestry Training Centre in Yei; and (c) scholarship fund</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs

<p>Component 1: Institutional review of operational efficacy for the national and state forestry administration arrangements and capacity for transition to the South Sudan Forestry Commission</p> <p>(Elements under ID)</p> <p>Activity 1: Overall review of the Forestry Directorate in the Ministry of Agriculture and of its corresponding state-level Units including: their context in the Ministry; reporting lines; coordination arrangements; workload-staffing match at all levels; operational efficacy; and goodness of fit for implementing the forestry programme (including CAMP proposals) and Forest Policy. Specific review of the proposal for adaptation to a Forestry Commission.</p> <p>Output: Report with clear recommendations for institutional restructuring and for creation of the Forestry Commission</p> <p>(Elements through this project)</p> <p>Activity 2: Detailed study of necessary operational capacity and the Forestry Directorate's interim (pre-Forestry Commission) inter-departmental coordination for implementing CAMP programmes</p> <p>Output: practical recommendations to be executed through this project in terms of staffing, consultancies, budget etc.</p> <p>Activity 3: Provide high-level resident advisor (2 years) for support to activities 1 and 2</p> <p>Output: (Under- Secretary would serve as part-time counterpart) - Support to Minister of Agriculture and national counterpart]</p> <p>Component 2: Technical support to establishment of the South Sudan Forestry Commission including its feasibility study</p> <p>(Elements under ID)</p> <ul style="list-style-type: none"> • To be decided by ID <p>(Elements through this project)</p> <p>Activity 4: Subject to government deciding to create a Forestry Commission, implementation of a feasibility study, following review of experiences with this institutional model in Africa (e.g. Zambia, Zimbabwe) and elsewhere (e.g. UK, New Zealand).</p> <p>Output: Report communicating lessons learnt with Forestry Commission model and with assessment of suitability for South Sudan and a costed feasibility study of implementation</p> <p>Activity 5: Operational support to a Forestry Commission.</p> <p>Output: Once confirmed that FC would be created, preparation of workplan, budgets,</p>
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Items	Information
	<p>specialised training needs assessments, facilitation of recruitment and procurement processes for specialised sector needs, including a library</p> <p>Activity 6: Core training for prospective Forestry Commission: On-the-job training at national and state levels and long-term formal training. Output: 20 on the job; 3 at degree level (local); 2 degree level (overseas); 10 diploma level, 3 national and 7 from the states (in Eastern and/or Southern Africa); 5 clerical and/or administrative staff</p> <p>Component 3: Advisory services to Forestry Policy, Planning and Administration (Elements under ID)</p> <ul style="list-style-type: none"> • None <p>(Elements through this project)</p> <p>Activity 7: Provide high-level resident advisor (2 years) for Policy and Planning. Output: and 1 national counterpart - Support to Director of Forestry and national counterpart</p> <p>Activity 8: Provide suitable consultants in areas of law, regulations, investment incentives, sector administration; and inter-sectoral coordination best practice. Output: 24 months of diverse specialists: Support to Forestry Directorate on critical macro issues in early years</p> <p>Component 4: Study of medium-term human resources development needs, competencies and gaps (Elements under ID)</p> <p>Activity 9(a): Contribute the administrative and common-services elements to the study. Output: Admin and common-services elements for overall report on human resources for the forestry sector</p> <p>(Elements through this project)</p> <p>Activity 9(b): Contribute the specialised forestry sector training elements for both men and women to the human resources study. Output: Specialised sectoral human resources study elements for the forestry sector</p> <p>Component 5: Implementation and coordination of forestry-related training (a) on the job training programmes (b) development of short-courses capacity at Kagelu Forestry Training Centre in Yei; and (c) scholarship fund (Elements under ID)</p> <p>All non-forestry specialised scholarships and training, plus:</p> <p>Activity 10: Establish internal monitoring and evaluation unit to assess outcomes, impact potential and cost-effectiveness of institutional reform and training investments Output: An M&E system to give feedback on benefits of institutional and human resources investment</p> <p>(Elements through this project)</p> <p>Activity 11: Systematically and regularly collect information on proposed hands-on training by all forestry projects and coordinate. Maintain liaison with Ministry of Labour. Output: Updates on hands-on training; coordinated activities</p> <p>Activity 12: Have oversight over on-the-job training carried out by international experts and/or advisers and progression of their national counterparts. Output: Monitoring to ensure skill and capacity transfer is occurring</p> <p>Activity 13: Study all proposals for in-country short and training of trainers courses by forestry projects; match with what Yei college offers; determine additional capacity for short courses at Yei and design necessary expansion of facilities there (additional consultant dormitories; staff houses; lecture room(s); field demonstration sites; teaching equipment; library extension and learning materials and computer capacity; transport capacity; budget, including for food. Outputs: Thereafter, Launch tenders, evaluate and select service providers for design, construction, equipping of Yei college extension for short courses (including a fully resourced library Fund and oversee construction or modification of additional premises and purchase and install all necessary equipment; provide consumable supplies. Oversee construction and equipping Operate the college's short-courses extension for its first 5 years (As part of operations) Launch Contract Teaching scheme (Lump Sum) to boost capacity of the college – hire temporarily from private sector, technical and/or trade schools, University, retirees etc. for selected specialised teaching tasks</p> <p>Activity 14: Extract from reports under Activity 1, 2 and 6 qualifications that need funding, mostly for training abroad. Bursaries are expected to cover only undergraduate and postgraduate study but can also cover specialised technician and/or diploma training.</p>

2.3 Service providers and beneficiaries

Items	Information
(1) Description of service providers within the framework of the project:	<ul style="list-style-type: none"> • Service provider is the Administration and Finance Department (assisted by Research and Training Department and ID Sector of CAMP/IDMP Implementation Coordination Task Team) under the Directorate of Forestry.
(2) Description of beneficiaries within the framework of the project:	<ul style="list-style-type: none"> • There is much stress on training so main beneficiaries will be the trained people. • Institutionally, the Forestry Directorate and its state-level counterparts will be a major beneficiary. • The Kagelu Forestry Training Centre in Yei will benefit from being expanded to host more and varied short-term courses.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<ul style="list-style-type: none"> • A more self-reliant South Sudan in matters of forestry sector staffing
(2) EIRR and/or FIRR, and/or other economic analysis:	<ul style="list-style-type: none"> • To be done at detailed formulation of project

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: a</td> <td>Project:</td> </tr> <tr> <td>Positive: c</td> <td>a: is likely to have minimal or little impact on the environment and/or society</td> </tr> <tr> <td></td> <td>b: may have an impact on the environment and/or society</td> </tr> <tr> <td></td> <td>c: is likely to have a significant impact on the environment and/or society</td> </tr> <tr> <td></td> <td>d: will have a significant impact on the environment and/or society</td> </tr> </table>	Negative: a	Project:	Positive: c	a: is likely to have minimal or little impact on the environment and/or society		b: may have an impact on the environment and/or society		c: is likely to have a significant impact on the environment and/or society		d: will have a significant impact on the environment and/or society
Negative: a	Project:										
Positive: c	a: is likely to have minimal or little impact on the environment and/or society										
	b: may have an impact on the environment and/or society										
	c: is likely to have a significant impact on the environment and/or society										
	d: will have a significant impact on the environment and/or society										
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Positive)</p> <ul style="list-style-type: none"> • Well-trained people and better organised sector institutions (as proposed under this project) can better implement the projects under CAMP and beyond it and they can also ensure proper economic, environment and social sustainability of interventions. 										

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • Operational efficiency measures for selected transactions • Staff numbers and qualifications
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • As at the start for easy comparison
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> • Physical existence of facilities • Change in institutional structures • Numbers of staff trained
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> • Ministry-level M&E • Donor/Government periodic review missions including at end of Phase I

2.7 Required human resources

(1) Principle of human resources management:	<p>Management level oversight over project; in addition:</p> <ul style="list-style-type: none"> • Gender-sensitive but competency and/or merit-based selection of counterpart staff (already competent or with good prospects of quick learning) • Assignment of technically competent personnel and juniors able to learn • Efficient and effective engagement of consultants and specialists outside of the government: all external experts to have a trainable counterpart • Sufficient staffing for field assessments and other tasks
(2) Required human resources in the public sector (Positions, grades and numbers):	<p>Long-term staff:</p> <ul style="list-style-type: none"> • Probable international advisor for first 2 years • Full time national senior level officer to lead team • Others as suggested under Components and/or Activities • Administrative support team
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Paid consultants/short-term teams - general ratios:</p> <ul style="list-style-type: none"> • Partly suggested under Components and/or Activities (section 2.2(1)) <p>Volunteers:</p> <ul style="list-style-type: none"> • Managers responsible for training, for liaison.

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	<table border="1"> <tr> <td>L</td> <td>L: Low</td> <td>M: Medium</td> <td>H: High</td> <td>(select an indicator from the list)</td> </tr> </table>	L	L: Low	M: Medium	H: High	(select an indicator from the list)
L	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	<ul style="list-style-type: none"> • Implementation of the project itself faces very low risk. • Initial problems in securing enough candidates for posts before targeted training commences 					

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	<p>Quality Staff:</p> <ul style="list-style-type: none"> • For sound development it is important to include investment in long-term university level education for a few specialists. Exact needs to be worked out as CAMP projects roll out and their needs are defined in detail. • Plans for this project should therefore not be set in concrete in advance. <p>Partnerships:</p> <ul style="list-style-type: none"> • In the sub region: in certain areas, the neighbouring countries have relevant practice,
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Items	Information
	<p>e.g. Uganda for establishing a Forestry Commission.</p> <ul style="list-style-type: none"> • Further afield: South Sudan should look for one or two partner(s) in Asia [e.g. India (general forestry, participatory forestry, agroforestry); China (dry land forestry, steep land afforestation)] • Donor backstopping: funding partner could foster partnership with their national forestry authority in own country • Global/CGIAR: links to the African Forestry Forum (AFF) in Nairobi, FAO, ITTO, ICRAF and CIFOR are essential for networking and getting information on best practices worldwide.

2.10 Routine operation and required resources after the completion of the project

<p>(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.</p>	<p>Continuation of all institutional periodic reviews; Maintenance of the facilities; Keeping staff updated in their professional knowledge; Knowledge-dissemination products: newsletters, papers, publications etc.</p>
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Part 3: Project cost estimation

Project duration	SSP/USD = 4												Total	% to total														
	Phase 1			Phase 2			Phase 3			Phase 4																		
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27			27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	
1 Management and operation of project	1,582	4,395	2,883	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	21,579	5,395	55%
1 Deployment of government staff	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	800	200	2%
1 Participation in key stakeholder meetings (per diem)	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	160	40	0%
2 Participation in key stakeholder meetings (transportation)	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	640	160	2%
2 Procurement of administrative services (contracted)	1,512	4,104	2,592	648	648	648	648	648	648	648	648	648	648	648	648	648	648	648	648	648	648	648	648	648	648	19,224	4,806	49%
3 Procurement of professional services (contracted)	1,512	1,512	1,512	378	378	378	378	378	378	378	378	378	378	378	378	378	378	378	378	378	378	378	378	378	378	3,024	756	8%
1 International consultant (long-term, advisor)	1,512	1,512	1,512	378	378	378	378	378	378	378	378	378	378	378	378	378	378	378	378	378	378	378	378	378	378	9,450	2,363	24%
2 International consultant (long-term, policy and planning)	1,080	1,080	1,080	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	6,750	1,688	17%
3 International consultant (short-term for law, regulation, etc.)	251	251	251	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	1,555	389	4%
4 Implementation of staff training	183	183	183	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	1,130	283	3%
1 Overseas training for forestry commission (per diem)	8	8	8	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	50	13	0%
2 Overseas training for forestry commission (transportation)	60	60	60	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	375	94	1%
3 Overseas training for forestry commission (tuition)																												
5 Implementation of research, studies and surveys																												
6 Delivery of extension and training services to the private sector																												
7 Operation and maintenance																												
2 Construction of infrastructure and procurement of equipment	1,224	3,127	2,566	635	635	635	635	635	635	635	635	635	635	635	635	635	635	635	635	635	635	635	635	635	635	17,671	4,418	45%
1 Construction of office buildings																												
2 Construction of research, training and other specialized buildings	2,527	2,527	2,527	632	632	632	632	632	632	632	632	632	632	632	632	632	632	632	632	632	632	632	632	632	632	15,798	3,950	40%
1 Expansion of building facilities in Yei college	2,527	2,527	2,527	632	632	632	632	632	632	632	632	632	632	632	632	632	632	632	632	632	632	632	632	632	632	15,798	3,950	40%
3 Construction of feeder roads																												
4 Construction of production, market and transportation facilities																												
5 Acquisition of land																												
6 Procurement of vehicles	1,200	600																								1,800	450	5%
1 Mini bus for forestry commission	500																									500	125	1%
2 4WD for forestry commission	400																									400	100	1%
3 Pick up for forestry commission	300																									300	75	1%
4 Mini bus for Yei college	250																									250	63	1%
5 4WD for Yei college	200																									200	50	1%
6 Pick up for Yei college	150																									150	38	0%
7 Procurement of equipment	24			3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	73	18	0%
1 ICT equipment for forestry commission	24																									24	6	0%
2 ICT equipment for Yei college																										26	7	0%
3 Training equipment																										10	3	0%
4 Academic books & journal subscription																										13	3	0%
3 Subsidies, equity and loans																												
1 Provision of cash and/or in-kind subsidies																												
2 Provision of training services to the private sector																												
3 Equity investments																												
4 Provision of loans																												
5 Social assistance/donation (Emergency)																												
Total (SSP '000)	2,776	7,522	5,448	1,385	1,385	1,385	1,385	1,385	1,385	1,382	1,382	1,382	1,382	1,382	1,382	1,382	1,382	1,382	1,382	1,382	1,382	1,382	1,382	1,382	1,382	39,250	9,812	100%
Total (USD '000)	694	1,880	1,362	346	346	346	346	346	346	346	346	346	346	346	346	346	346	346	346	346	346	346	346	346	346	9,812	9,812	100%
% to total	7%	19%	14%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	100%	100%	

Public sector project
Routine work by government
Private sector project
Routine work by private sector

4.4.15 Establishment of the South Sudan Forest Research Institute project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Forestry		
(2) Project name:	Establishment of the South Sudan Forest Research Institute project		
(3) Project ID:	0 3 . 1 5 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2017/18	Ending FY: 2031/32	Duration (years): 15
(5) Total investment:	SSP 20,170,000	USD 5,042,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FO.SA2	Public Sector Institution and Management Capacity Development	Table 2-3
(2) Government organisation:	07	MAF-FO	Directorate of Forestry	Table 2-6
	07	MAF-FO	State-level equivalent organisation	Table 2-6
(3) Activity types:	204	SP-RE	Service delivery and Infrastructure development - research and experiment	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	X
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	X
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	X
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	X
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>All development amounts to correct application of knowledge. In South Sudan as everywhere else, forestry will develop best if it is founded on updated knowledge properly applied. A start has been made on training but a critical second arm of knowledge is research and for this, the country lacks even a single research station.</p> <p>It is essential that research activities be started as soon as possible, with initial focus on adapting international knowledge and best practice to South Sudan's reality. Such research can start at the university and partly at Agricultural Research stations; but ideally the establishment of a dedicated Forestry Research Institute to coordinate it all and to champion the cause of research and development covering the full forestry value chain should not be delayed too much.</p> <p>Research has a vast scope in terms of covering the value chain from seed to processed forest product but even more so in terms of ranging at one end from relatively simple adaptation of existing knowledge, packaging it and adapting it to local circumstances. At the other end would be cutting edge science at the molecular and lower levels, which these days is the most effective way to adapt plants and animals more quickly than by traditional breeding. Such research can help forest plants survive better in stressful environments or adapt to climate change. There is also research on economics, sociology, policy and institutional arrangements with a view to discovering what works best or which circumstances affect sector performance.</p> <p>In view of this vast potential scope, a critical need for South Sudan, given its nascent institutional and manpower capacity, is to be highly selective. Also to progress towards a full-fledged research agenda and institution by steps, taking advantage of related institutions and capacity that is already available; and, starting with topics that do not call for cutting edge science or analytical capacity.</p> <p>In this project, therefore, it is proposed to move in steps, starting with limited research perhaps at the Agricultural Research Station in Yei, but perhaps also with links to the University of Juba, while preparing for an Institute. It is also proposed to start with adaptation of research and best practice done elsewhere in the world and to focus initially therefore on adaptation to local needs and conditions. During these early days, structures would be established; manpower trained; and partnerships cultivated domestically and with international establishments, so that upon establishment, the South Sudan Forest Research Institute is already networked and has a modest but useful research programme already underway.</p>
(2) Objectives:	<p>To establish (structures, equipment and tools, training of staff, initial operational costs) a Forest Research Institute with a focused and practical agenda of largely biophysical tasks which can enable the country to adapt global best practice, while progressively initiating original research and development targeting real-life opportunities and challenges in the country. It is proposed that the Institute be co-located with the Kagelu Forestry Training Centre in Yei, but have links with the University of Juba.</p>
(3) Overall description including temporal and spatial extent of project:	<p>Research Institute should probably be based in Yei to be near the Forestry Training Centre but should service all agro-ecological zones, initially especially the most forested, where economic opportunities are highest, and where forests and/or woodlands are most threatened. But it is important for a research entity to seek ways for forests to play a role in livelihood zones where forests or trees have not in the past been given attention.</p> <p>The project would consist of stepwise establishment of the South Sudan Forest Research Institute, potentially located together with the Kagelu Forestry Training Centre in Yei¹⁵⁶, but with links to the University of Juba being desirable; activities would, however, potentially take place anywhere in the country with experimental sites (eventually sub-stations) to cover its ecological diversity. Project support would extend over a period of 14 years, starting in 2017/18 and ending in 2030/31.</p> <p>The start would be to establish a team, a "founding board of directors", to conceptualise and guide implementation of the institute. While planning the institute, the board would identify earliest research tasks and arrange for their execution at the University of Juba (staff and students) or at research establishments for crop agriculture. The board would also prioritise areas for long-term scholarships for future institute staff, identify external partners within and outside Africa, plan the institute and see it established. Given limited resources and capacity in its formative period, the Institute would strictly prioritise its</p>

¹⁵⁶ The 2008 Forestry Certificate Course Curriculum document reports that at that time (and things may have changed), the campus lacked certain disciplines among its staff: a laboratory; camping and field work equipment; demonstration equipment for wood processing; demonstration plots; an arboretum and a herbarium; and a teaching forest. In Yei there is also a nearby agricultural research centre.

Items	Information
	<p>research: in areas of high forest endowment; where forests face greatest threats; and where potential for quick developmental impact is greatest. The initial focus would be on biophysical research and development; as much as possible of it being adaptation of best practice from elsewhere.</p> <p>Drawing upon established research the results of which are freely accessible to the general public, the themes and/or topics to consider first for South Sudan research focus could include (mostly biophysical but also some economics and/or policy) the following, from among which the Board should select only a manageable number of important topics:</p> <p>Resource Management:</p> <ul style="list-style-type: none"> • Species and variety trials for industrial and smallholder tree planting • Long-term field monitoring of productivity performance for natural and planted trees and/or ecosystems (including permanent sample plots) and sub-plots for monitoring performance and/or resilience response to climate change • Performance of various indigenous and exotic species used in replanting and/or enrichment planting • Adaptation of wildfire control measures to agro-ecological zones • Compatibility of selected indigenous and exotic species to use in agro-sylvo-pastoral systems • Integration of fruit and food trees into forestry and agroforestry management • Identification and correction of poor <i>Acacia Seyal</i> (gum acacia) regeneration • Determination of carbon-capture and release coefficients of forest ecosystems (vegetation, soils) <p>Value Addition and Utilisation:</p> <ul style="list-style-type: none"> • Approaches to affordable enhancement of yield efficiency in smallholder charcoal production • Development of practical measures for yield enhancement in small and medium scale sawmilling • Cost-effective measures for improving resistance of poles to termite damage <p>Economics and Other:</p> <ul style="list-style-type: none"> • Key determinants of domestic demand for forestry-based tourism • Economics of various combinations of traditional and new agro-sylvo-pastoral systems (including gum-acacia dominated systems) • Identification and preliminary characterisation of non-timber forest products of important medicinal value (and recording associated indigenous knowledge) • Forest functions and products of particular cultural importance <p>Upon establishment (project would support creation of the infrastructure, supply of equipment and consumables, and on-the-job training of staff), the Institute would complement its internal capacity with contract research within the country. The 14-year project support would include a second phase of consolidation.</p>
(4) Component structure:	<p>Component 1: Preparatory phase of support to establishment of forestry research institute Component 2: Implementation phase of support to forestry research Component 3: Phase II of Support to forestry research – capacity consolidation of South Sudan Forest Research Institute</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>The activities below assume that land has already been granted by government so negotiation for this is not part of the project's obligations. Similarly, agreements for connection to utilities (power, water) are assumed to be in place. Implementation of the project should draw upon any facilitation available from the National Agricultural Research Board (NARB) as needed:</p> <p>Component 1: Preparatory phase of support to establishment of forestry research institute</p> <p>Activity 1: Establish and operationalise a founding inter-sectoral board of directors for the prospective Forestry Research Institute comprising members from the University of Juba, other South Sudanese experts in a personal capacity (specifically including the University of Juba) and from the Eastern Africa sub-region and ex-officio members from key ministries to design and plan phasing of research institute.</p> <p>Outputs: Report reviewing state of agricultural research in the context of forestry; Report on priorities for forestry research and workplan for interim start on research at University of Juba; Master Plan for Forestry Research in South Sudan; Feasibility study and costed plan for institutional development of the South Sudan Forest Research Institute</p> <p>Activity 2: Support priority forestry research at the Kagelu Agricultural Research Centre and at the University of Juba – including funding of student research - (focus on identification and adaptation of international best practice for South Sudan</p>
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Items	Information
	<p>application) (see section 2.4(2) for possible areas or themes of focus for research) Output: Research activities ongoing</p> <p>Activity 3: Award undergraduate and postgraduate scholarships and/or bursaries programme for future forest research institute staff¹⁵⁷ Output: activity may be moved to Activity no 14 under project “<u>Forestry institutional and human resources capacity development</u>”</p> <p>Activity 4: Develop preliminary institutional partnerships preferably with a combination of African and other international forestry and/or forest products research establishments Output: Partnership programme, with staff exchanges and shared research topics which several parties contribute to. Student research internships could be an important element</p> <p>Activity 5: Supervise talent search for future head of the Forestry Research Institute (be open to a non-South Sudanese for first years) to participate in planning, launch and identification of future staff and scholarship beneficiaries Output: Confidential shortlists of candidates and of suitable national counterparts</p> <p>Component 2: Implementation phase of support to forestry research</p> <p>Activity 6: Launch tenders, evaluate and select service providers for design, construction, might include staff housing, equipping of prospective Forestry Research Institute (including a fully resourced library¹⁵⁸ and laboratories) Output: Detailed investment programme and its implementation, Evaluation reports for decision-makers to fund</p> <p>Activity 7: Oversee construction and equipping (future head and subcontracted specialists) Output: Progress reports by Executive head of interim research activity</p> <p>Activity 8: Negotiate use (and any upgrading if needed) of experimental fields at the Kagelu Forestry Training Centre campus, protocols for securing potential experimental sites in the field Output: Agreements or MOUs signed</p> <p>Activity 9: Open Forest Research Institute campus and operate for its first years (Phase I of project 5 years). Output: Official launch</p> <p>Activity 10: (As part of operations) Launch Contract Research scheme to boost capacity of the institute (by contracting out selected tasks). Research Grant: Purpose is to farm out research that core staff cannot cope with, but need to make progress on. Can include adaptation of international findings to the country Key sources likely to be University (staff and postgrad students); retired experts; non-forestry institutions. Can be used to pay for specialised tests which Institute cannot afford specialised equipment for since used too infrequently Grants should generally be small to avoid tempting the greedy No grants should be awarded which the Institute is unable to supervise and judge the quality of Approval of grants to be transparent and never by any single person, including the Institute manager Output: Scheme operational; transparent award and supervision regime to avoid favouritism and waste of awards on friends and corrupt application of funding</p> <p>Component 3: Phase II of Support to forestry research – capacity consolidation of South Sudan Forest Research Institute [year 6 to 14]. As phase II preparation approaches, the project should consult closely with the ID sector to agree on division of responsibilities for institutional strengthening, including for long-term training.</p> <p>Activity 11: Fund construction or modification of additional premises and purchase and install all necessary equipment; provide consumable supplies. Output: Facilities established</p> <p>Activity 12: Award additional scholarships at local and overseas universities for researchers.¹⁵⁹ Output: Personnel graduated and hired back</p> <p>Activity 13: Consolidate and expand contract research scheme Output: Quality research products</p> <p>Activity 14: Upgrade information dissemination and strengthen links with extension Output: Client service, including especially field operations and extension services</p> <p>Activity 15: Establish internal monitoring and evaluation unit to assess outcomes, impact</p>

¹⁵⁷ For indicative numbers of scholarships etc., see Activity 14 under Component 5 of project “Forestry institutional and human resources capacity development”

¹⁵⁸ Electronic information sources are a key part of modern libraries. Thus, supply of computers and subscription to electronic libraries and databases is a rapid way for building up library capacity. An example is the compendia at CABI – www.cabi.org/compendia which includes a forestry module.

¹⁵⁹ Link to Activity 14 under Component 5 of project “Forestry institutional and human resources capacity development”

Items	Information										
	<p>potential and cost-effectiveness of research and development activities Output: Actionable reports on performance and processes efficacy</p>										
2.3 Service providers and beneficiaries											
(1) Description of service providers within the framework of the project:	<ul style="list-style-type: none"> • Service provider is the Research and Training Department under the Directorate of Forestry. Technical services will be provided by consulting firms and/or consultants for data analysis and establishment and maintenance of national forestry databases. Temporary field teams will be recruited and disbanded from time to time to suit workload. 										
(2) Description of beneficiaries within the framework of the project:	<ul style="list-style-type: none"> • Beneficiaries of the project will be national and state governments managing forests as well as rural communities and private stakeholders in forestry or agroforestry. The Kagelu Forestry Training Centre in Yei will benefit from being complemented with research activity and facilities, as will the nearby Agricultural Research Station and the University of Juba. 										
2.4 Outcomes, impact and contributions to value added (i.e. economic growth)											
(1) Outcomes and impact:	<ul style="list-style-type: none"> • A more self-reliant South Sudan in matters of forestry knowledge; • In long-term, cost effective access to knowledge for better field performance. 										
(2) EIRR and/or FIRR, and/or other economic analysis:	<ul style="list-style-type: none"> • To be done at detailed formulation of project 										
2.5 Environmental and social impact, and mitigation measures											
(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1" style="width: 100%;"> <tr> <td style="width: 15%;">Negative: a</td> <td>Project:</td> </tr> <tr> <td>Positive: c</td> <td>a: is likely to have minimal or little impact on the environment and/or society</td> </tr> <tr> <td></td> <td>b: may have an impact on the environment and/or society</td> </tr> <tr> <td></td> <td>c: is likely to have a significant impact on the environment and/or society</td> </tr> <tr> <td></td> <td>d: will have a significant impact on the environment and/or society</td> </tr> </table>	Negative: a	Project:	Positive: c	a: is likely to have minimal or little impact on the environment and/or society		b: may have an impact on the environment and/or society		c: is likely to have a significant impact on the environment and/or society		d: will have a significant impact on the environment and/or society
Negative: a	Project:										
Positive: c	a: is likely to have minimal or little impact on the environment and/or society										
	b: may have an impact on the environment and/or society										
	c: is likely to have a significant impact on the environment and/or society										
	d: will have a significant impact on the environment and/or society										
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Positive)</p> <ul style="list-style-type: none"> • A look at potential topics of research will show potential for benefit to the environment if findings are applied in a mainstream manner. • Research on productivity enhancement and resilience leads to social improvement either through commercial or community-scale improvements. 										
2.6 Monitoring and evaluation for impact measurement											
(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • Absence of a Research Institute or its equivalent and of a significant research activity 										
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • Existence of the Research Institute; a range of ongoing research programmes; staff trained for research; partnerships for research; publications and research messages feeding into government and extension. 										
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> • Physical existence; numbers of staff trained, papers and other research products; interview and questionnaire surveys on partnerships 										
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> • Directorate of Forestry's internal M&E; donor/Government periodic review missions including at end of Phase I 										
2.7 Required human resources											
(1) Principle of human resources management:	<p>Management level oversight over project; in addition:</p> <ul style="list-style-type: none"> • Competency and/or merit-based selection of counterpart staff (already competent or with good prospects of quick learning) • Assignment of technically competent personnel and juniors able to learn • Efficient and effective engagement of consultants and specialists outside of the government: all external experts to have a trainable counterpart • Sufficient staffing for field assessments and other tasks 										
(2) Required human resources in the public sector (Positions, grades and numbers):	<p>Long-term staff:</p> <ul style="list-style-type: none"> • Probable expatriate advisor for first 3 years • Full time national senior level officer to lead team • One medium level leader of biophysical research • One medium level leader of economics research • One librarian (could be shared with Kagelu Forestry Training Centre) • One information and research and/or extension interface officer • Initially about 5 professional graduates and/or postgraduate staff, to grow as others get trained • Administrative support team 										
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Paid consultants/short-term teams - general ratios:</p> <ul style="list-style-type: none"> • focused short-term experts come when new research area is launched and selectively for follow-up • Graduate and/or postgraduate researchers (1 per research programme) • Undergraduate researchers (2 per research programme) • One versatile multi-purpose field team initially: a technician, assistants and enumerators or labourers (as needed to suit field workload) <p>Voluntary:</p> <ul style="list-style-type: none"> • Collaboration with research institute required and hosting sample plots in concession 										

Items	Information					
	and plantation areas. • Welcoming research teams in processing plants etc					
2.8 Risk assessment with respect to project objectives and resources to be applied						
(1) Expected level of risk:	<table border="1"> <tr> <td>L</td> <td>L: Low</td> <td>M: Medium</td> <td>H: High</td> <td>(select an indicator from the list)</td> </tr> </table>	L	L: Low	M: Medium	H: High	(select an indicator from the list)
L	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	<ul style="list-style-type: none"> • Implementation of the project itself faces very low risk. • Initial problems in securing enough candidates for posts before targeted training commences 					
2.9 Other special considerations and/or notes						
(1) Other special considerations and/or notes:	<p>Quality Staff:</p> <ul style="list-style-type: none"> • For research it is particularly important to invest in long-term university level education for a few specialists. Exact needs to be worked out during preparatory phase of this project when priority themes and/or topics of research are decided by the board. <p>Partnerships:</p> <ul style="list-style-type: none"> • In the subregion: Kenya's KEFRI has a good reputation; more distant is South Africa's research community (exotic pines and eucalypts, private sector participation; watershed functions; forests as wildlife habitat; invasive weeds control). • Further afield: South Sudan should look for one or two partner(s) in Asia [e.g. India (general forestry, participatory forestry, agroforestry); China (dryland forestry, steep land afforestation)] • Donor backstopping: Funding partner could foster partnership with a lead research institute in own country • Global/CGIAR: links to FAO, ICRAF and CIFOR are essential for networking and getting information on best practices worldwide. 					
2.10 Routine operation and required resources after the completion of the project						
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<ul style="list-style-type: none"> • Continuation of all ongoing research and succession by other research as topics are completed; • Maintenance of the facilities; • Keeping staff updated in their professional knowledge; • Knowledge-dissemination products: newsletters, papers, publications etc. • Staff levels about same as at 2.8 (2) above 					

Part 3: Project cost estimation

Project duration	SSP/USD = 4												Total	% to total																
	Phase 1			Phase 2			Phase 3			Phase 4																				
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27			27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40			
03.15 Establishment of the South Sudan Forest Research Institute project	Cost group																													
1 Management and operation of project	873	873	873	873	873	873	873	873	873	873	873	873	873	873	873	873	873	873	873	873	873	873	873	873	873	873	12,216	3,054	61%	
1 Deployment of government staff	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	140	35	1%	
1 Laboratory testing contracted out	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	140	35	1%	
3 Procurement of professional services (contracted)	579	579	579	579	579	579	579	579	579	579	579	579	579	579	579	579	579	579	579	579	579	579	579	579	579	579	8,100	2,025	40%	
1 International consultant (short term for specific research area)	579	579	579	579	579	579	579	579	579	579	579	579	579	579	579	579	579	579	579	579	579	579	579	579	579	579	8,100	2,025	40%	
4 Implementation of staff training	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	2,240	560	11%	
1 Materials for research works	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	1,400	350	7%	
2 Consumables for laboratory	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	560	140	3%	
3 Consumables for nursery, etc.	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	280	70	1%	
6 Delivery of extension and training services to the private sector	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	1,736	434	9%		
7 Operation and maintenance	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	560	140	3%	
1 Consumables for office/library	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	56	14	0%	
2 Journal subscription, academic books	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	56	14	0%	
3 Maintenance of facilities/vehicles/equipment	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	1,120	280	6%	
2 Construction of infrastructure and procurement of equipment	950	5,604																									6,554	1,639	32%	
1 Construction of office buildings	2,580																										2,580	645	13%	
1 Buildings in the institute	2,580																										2,580	645	13%	
2 Construction of research, training and other specialized buildings	2,670																										2,670	668	13%	
1 Laboratory in the institute	810																										810	203	4%	
2 Storage shed	900																										900	225	4%	
3 Water supply facilities in the institute	360																										360	90	2%	
4 Fire towers	600																										600	150	3%	
3 Construction of feeder roads																														
4 Construction of production, market and transportation facilities																														
5 Acquisition of land																														
6 Procurement of vehicles	950																										950	238	5%	
1 4WD for office	200																										200	50	1%	
2 Pick up for office	150																										150	38	1%	
3 Van	250																										250	63	1%	
4 Track	300																										300	75	1%	
5 Motorbikes	50																										50	13	0%	
7 Procurement of equipment	354																										354	89	2%	
1 ICT equipment for library	24																										24	6	0%	
2 ICT equipment for office	60																										60	15	0%	
3 Laboratory equipment	200																										200	50	1%	
4 Equipment and tools for nursery	40																										40	10	0%	
5 Tools for field works	30																										30	8	0%	
3 Subsidies, equity and loans	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	1,400	350	7%	
1 Provision of cash and/or in-kind subsidies	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	1,400	350	7%	
1 Research grants	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	1,400	350	7%	
2 Provision of training services to the private sector																														
3 Equity investments																														

03.15 Establishment of the South Sudan Forest Research Institute project (cont.)

SSP/USD = 4

Project duration	Phase 1										Phase 2					Phase 3					Phase 4					Total				
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000	USD '000			
4 Provision of loans																														
5 Social assistance/donation (Emergency)																														
Total (SSP '000)				950	6,577	973	973	973	973	973	973	973	973	973	973	973	973	973	973	973	973	973	973	973	973	973	973	973	20,170	100%
Total (USD '000)				238	1,644	243	243	243	243	243	243	243	243	243	243	243	243	243	243	243	243	243	243	243	243	243	243	5,042		
% to total				5%	33%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	100%		

Public sector project
 Routine work by government
 Private sector project
 Routine work by private sector

5. Fisheries Subsector

5.1 Investment Planning Space

5.1.1 Investment Planning Space by Development Theme

Subsector	Development Theme Project ID Project name	Year												SSP ('000)	USD ('000)	Respon- sibility
		Phase I 2016/17 2017/18 2018/19 2019/20	Phase II 2020/21 2021/22 2022/23 2023/24 2024/25	Phase III 2025/26 2026/27 2027/28 2028/29 2029/30	Phase IV 2030/31 2031/32 2032/33 2033/34 2034/35 2035/36 2036/37 2037/38 2038/39 2039/40											
04 Fisheries Subsector														459,740	114,935	
T1 Reconstruction and recovery														97,611	24,403	
04.01	Fisheries and aquaculture law project													2	1,510	377 NS
04.02	Micro credit for fishing communities project													10	60,761	15,190 NS
04.03	Prevention of HIV infection in fishing communities project													10	35,341	8,835 NS
T2 Food and nutrition security														95,757	23,939	
04.04	Fisheries information and fisheries resource management systems development project													7	56,361	14,090 NS
04.05	Private sector promotion of small scale aquaculture investment													0	3,000	750 P
04.06	Routine fisheries information and resource management													0		NS
04.07	Small scale aquaculture development and promotion project													7	36,396	9,099 NS
04.08	Routine small scale aquaculture development													0		NS
T3 Economic growth and livelihood improvement														10,712	2,678	
04.09	Development of urban fish market infrastructure project													25	10,460	2,615 NS/S
04.10	Private sector establishment of feedmills for aquaculture													0	252	63 P
04.11	Private sector establishment of ice production facilities													0		P
04.12	Private sector promotion of large scale commercial aquaculture													0		P
T4 Agriculture sector transformation														138,516	34,629	
04.13	Development of fish landing site infrastructure project													8	124,738	31,185 NS
04.14	Private sector promotion of value adding for local and export markets													0		P
04.15	South Sudan national fisheries competent authority project													4	13,778	3,444 N
04.16	Routine Quality Assurance and Inspection by CA													0		N
T5 Institutional development														117,144	29,286	
04.17	Establishment of fisheries training and research institute project													10	58,047	14,512 N
04.18	Establishment of national aquaculture research and training centre project													8	31,653	7,913 N
04.19	Fishers and fisheries communities training project													16	2,946	736 N/NS
04.20	Private sector fisheries and aquaculture technical training project													0		P
04.21	Regional fisheries and aquaculture research project													0		P
04.22	Strengthening of fisheries and aquaculture research project													20	14,200	3,550 N/NS
04.23	States aquaculture training project													15	2,060	515 NS/S
04.24	States fisheries services capacity development project													15	8,239	2,060 NS/S

Note: N: National government; S: State government; P: private sector
 PPP: Public and private sector partnership
 Public sector project
 Routine work by government
 Private sector project
 Routine work by private sector

5.1.3 Investment Planning Space by Subsector Area/Programme

Subsector	Subsector area/programme	Project ID	Project name	Phase I		Phase II		Phase III		Phase IV				Year	SSP ('000)	USD ('000)	Responsibility							
				2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25					2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32
04 Fisheries Subsector	Policy and legal framework development	04.01	Fisheries and aquaculture law project												459,740	114,935								
	Public sector institution and management capacity development	04.15	South Sudan national fisheries competent authority project												1,510	377								
		04.16	Routine Quality Assurance and Inspection by CA												1,510	377	NS							
		04.17	Establishment of fisheries training and research institute project												127,976	31,994								
		04.18	Establishment of national aquaculture research and training centre project												13,778	3,444	N							
		04.21	Regional fisheries and aquaculture research project												58,047	14,512	N							
		04.22	Strengthening of fisheries and aquaculture research project												31,653	7,913	N							
		04.23	States aquaculture training project												14,200	3,550	N/S							
		04.24	States fisheries services capacity development project												2,060	515	N/S							
	Public infrastructure development	04.09	Development of urban fish market infrastructure project												135,198	33,800								
		04.13	Development of fish landing site infrastructure project												10,460	2,615	N/S							
	Private sector projects and businesses	04.05	Private sector promotion of small scale aquaculture investment												3,252	813								
		04.10	Private sector establishment of feedmills for aquaculture												3,000	750	P							
		04.11	Private sector establishment of ice production facilities												252	63	P							
		04.12	Private sector promotion of large scale commercial aquaculture												0	0	P							
		04.14	Private sector promotion of value adding for local and export markets												0	0	P							
		04.20	Private sector fisheries and aquaculture technical training project												0	0	P							
	Fisheries management and productivity enhancement	04.02	Micro credit for fishing communities project												155,409	38,852								
		04.03	Prevention of HIV infection in fishing communities project												60,761	15,190	NS							
		04.04	Fisheries information and fisheries resource management systems development project												35,341	8,835	NS							
		04.06	Routine fisheries information and resource management												56,361	14,090	NS							
		04.19	Fishers and fisheries communities training project												2,946	736	N/S							
	Aquaculture production and productivity enhancement	04.07	Small scale aquaculture development and promotion project												36,396	9,099								
		04.08	Routine small scale aquaculture development												36,396	9,099	NS							

Note: N: National government; S: State government; P: private sector
PPP: Public and private sector partnership

5.2 Summary of funding requirements

5.2.1 Summary of project cost and scaling-up cost

Subsector	Development Theme Project ID	Project name	SSP/USD = 4.00											
			Phase I	Phase II	Phase III	Phase IV	SSP (million)	USD (million)						
00	CAMP Investment Plan total		15/16 16/17 17/18 18/19 19/20	20/21 21/22 22/23 23/24 24/25	25/26 26/27 27/28 28/29 29/30	30/31 31/32 32/33 33/34 34/35 35/36 36/37 37/38 38/39 39/40	4,112.1	1,028.0						
	Project cost		130.6 178.1 333.0 322.9 299.5	316.6 316.4 284.3 255.3 262.2	233.0 204.9 113.1 97.4 115.7	76.4 71.6 66.0 78.9 66.6 61.4 76.6 60.2 46.0 45.4	8,485.3	2,121.3						
	Scaling-up cost		0.1 2.2 3.1 13.1 23.5	53.4 74.7 89.8 80.8 90.4	213.0 203.8 360.2 374.4 329.1	469.5 505.4 545.6 513.6 581.9 666.0 689.5 823.6 863.7 915.1	12,597.3	3,149.3						
	Grand total		130.7 180.2 336.1 336.1 323.0	370.0 391.1 374.0 336.1 352.6	446.0 408.8 473.2 471.8 444.8	545.9 577.0 611.6 592.4 648.5 727.4 766.1 883.8 909.7 960.5	455.8	114.0						
04	Fisheries Subsector		8.0 12.1 18.2 19.8 17.6	14.8 16.4 20.7 20.4 26.1	28.0 27.0 25.7 23.5 17.0	14.6 18.9 16.2 29.0 16.2 16.2 2.2 2.0	1,151.4	287.9						
	Project cost		0.1 0.5 0.5 0.7	3.0 4.1 10.7 11.1 12.4	15.8 19.2 20.1 22.5 29.5	39.4 48.7 55.3 61.1 86.1 94.8 121.1 128.1 166.9 199.3	1,607.3	401.8						
	Scaling-up cost		8.0 12.2 18.7 20.3 18.4	17.8 20.5 31.5 31.5 38.6	43.9 46.2 45.8 46.0 46.5	54.1 67.6 71.5 90.1 102.3 111.0 150.1 144.3 169.1 201.3	97.6	24.4						
	Subsector total		0.8 0.7	0.8 4.6 10.5 10.5 10.5	10.5 10.5 10.5 10.5 10.5	6.7	40.4	10.1						
T1	Reconstruction and recovery		0.1 0.5 0.5 0.7	0.8 1.4 1.6 1.6 1.6	3.2 2.8 5.4 5.4 5.4	11.5 22.0 24.3 25.1 35.2 37.2 48.8 51.4 53.9 64.2	501.2	101.0						
	Project cost		0.8 0.8 0.5 0.5 0.7	1.6 6.0 12.1 12.1 12.1	13.7 13.3 15.9 15.9 15.9	18.2 22.0 24.3 25.1 35.2 37.2 48.8 51.4 53.9 64.2	1.5	0.4						
04.01	Fisheries and aquaculture law project		0.8 0.7	0.8 4.6 10.5 10.5 10.5	10.5 10.5 10.5 10.5 10.5	6.7	40.4	10.1						
	Scaling-up cost		0.1 0.5 0.5 0.7	0.8 1.4 1.6 1.6 1.6	3.2 2.8 5.4 5.4 5.4	11.5 22.0 24.3 25.1 35.2 37.2 48.8 51.4 53.9 64.2	501.2	101.0						
	Project total		0.8 0.8 0.5 0.5 0.7	1.6 6.0 12.1 12.1 12.1	13.7 13.3 15.9 15.9 15.9	18.2 22.0 24.3 25.1 35.2 37.2 48.8 51.4 53.9 64.2	1.5	0.4						
04.02	Micro credit for fishing communities project		0.8 0.8 0.5 0.5 0.7	1.6 6.0 12.1 12.1 12.1	13.7 13.3 15.9 15.9 15.9	18.2 22.0 24.3 25.1 35.2 37.2 48.8 51.4 53.9 64.2	1.5	0.4						
	Project cost		0.8 0.8 0.5 0.5 0.7	1.6 6.0 12.1 12.1 12.1	13.7 13.3 15.9 15.9 15.9	18.2 22.0 24.3 25.1 35.2 37.2 48.8 51.4 53.9 64.2	1.5	0.4						
	Scaling-up cost		0.1 0.5 0.5 0.7	0.8 1.4 1.6 1.6 1.6	3.2 2.8 5.4 5.4 5.4	11.5 22.0 24.3 25.1 35.2 37.2 48.8 51.4 53.9 64.2	501.2	101.0						
	Project total		0.8 0.8 0.5 0.5 0.7	1.6 6.0 12.1 12.1 12.1	13.7 13.3 15.9 15.9 15.9	18.2 22.0 24.3 25.1 35.2 37.2 48.8 51.4 53.9 64.2	1.5	0.4						
04.03	Prevention of HIV infection in fishing communities project		0.8 0.8 0.5 0.5 0.7	1.6 6.0 12.1 12.1 12.1	13.7 13.3 15.9 15.9 15.9	18.2 22.0 24.3 25.1 35.2 37.2 48.8 51.4 53.9 64.2	1.5	0.4						
	Project cost		0.8 0.8 0.5 0.5 0.7	1.6 6.0 12.1 12.1 12.1	13.7 13.3 15.9 15.9 15.9	18.2 22.0 24.3 25.1 35.2 37.2 48.8 51.4 53.9 64.2	1.5	0.4						
	Scaling-up cost		0.1 0.5 0.5 0.7	0.8 1.4 1.6 1.6 1.6	3.2 2.8 5.4 5.4 5.4	11.5 22.0 24.3 25.1 35.2 37.2 48.8 51.4 53.9 64.2	501.2	101.0						
	Project total		0.8 0.8 0.5 0.5 0.7	1.6 6.0 12.1 12.1 12.1	13.7 13.3 15.9 15.9 15.9	18.2 22.0 24.3 25.1 35.2 37.2 48.8 51.4 53.9 64.2	1.5	0.4						
T2	Food and nutrition security		6.1 8.7 10.9 10.6 7.5	6.5 6.3 5.0 4.9 5.4	6.7 5.2 5.1 5.1 0.2	0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	95.8	23.9						
	Project cost		6.1 8.7 10.9 10.6 7.5	6.5 6.3 5.0 4.9 5.4	6.7 5.2 5.1 5.1 0.2	0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	95.8	23.9						
	Scaling-up cost		0.8 0.8 5.8 5.8 6.4	6.8 5.8 5.8 6.4	6.8 5.8 5.2 5.5 10.1	11.6 10.8 11.2 13.3 16.8 20.0 21.6 23.0 22.7 23.5	227.3	56.8						
	Project total		6.9 9.5 16.7 16.4 13.9	13.3 12.1 10.8 11.3	13.5 10.7 10.7 11.8	18.4 22.6 26.0 38.1 41.8 43.8 64.8 64.8 45.3 47.0	323.1	80.8						
04.04	Fisheries information and fisheries resource management systems development project		6.1 8.7 10.9 10.6 7.5	6.5 6.3 5.0 4.9 5.4	6.7 5.2 5.1 5.1 0.2	0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	95.8	23.9						
	Project cost		6.1 8.7 10.9 10.6 7.5	6.5 6.3 5.0 4.9 5.4	6.7 5.2 5.1 5.1 0.2	0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	95.8	23.9						
	Scaling-up cost		0.8 0.8 5.8 5.8 6.4	6.8 5.8 5.8 6.4	6.8 5.8 5.2 5.5 10.1	11.6 10.8 11.2 13.3 16.8 20.0 21.6 23.0 22.7 23.5	227.3	56.8						
	Project total		6.9 9.5 16.7 16.4 13.9	13.3 12.1 10.8 11.3	13.5 10.7 10.7 11.8	18.4 22.6 26.0 38.1 41.8 43.8 64.8 64.8 45.3 47.0	323.1	80.8						
04.05	Private sector promotion of small scale aquaculture investment		6.1 8.7 10.9 10.6 7.5	6.5 6.3 5.0 4.9 5.4	6.7 5.2 5.1 5.1 0.2	0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	95.8	23.9						
	Project cost		6.1 8.7 10.9 10.6 7.5	6.5 6.3 5.0 4.9 5.4	6.7 5.2 5.1 5.1 0.2	0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	95.8	23.9						
	Scaling-up cost		0.8 0.8 5.8 5.8 6.4	6.8 5.8 5.8 6.4	6.8 5.8 5.2 5.5 10.1	11.6 10.8 11.2 13.3 16.8 20.0 21.6 23.0 22.7 23.5	227.3	56.8						
	Project total		6.9 9.5 16.7 16.4 13.9	13.3 12.1 10.8 11.3	13.5 10.7 10.7 11.8	18.4 22.6 26.0 38.1 41.8 43.8 64.8 64.8 45.3 47.0	323.1	80.8						
04.06	Routine fisheries information and resource management		6.1 8.7 10.9 10.6 7.5	6.5 6.3 5.0 4.9 5.4	6.7 5.2 5.1 5.1 0.2	0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	95.8	23.9						
	Project cost		6.1 8.7 10.9 10.6 7.5	6.5 6.3 5.0 4.9 5.4	6.7 5.2 5.1 5.1 0.2	0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	95.8	23.9						
	Scaling-up cost		0.8 0.8 5.8 5.8 6.4	6.8 5.8 5.8 6.4	6.8 5.8 5.2 5.5 10.1	11.6 10.8 11.2 13.3 16.8 20.0 21.6 23.0 22.7 23.5	227.3	56.8						
	Project total		6.9 9.5 16.7 16.4 13.9	13.3 12.1 10.8 11.3	13.5 10.7 10.7 11.8	18.4 22.6 26.0 38.1 41.8 43.8 64.8 64.8 45.3 47.0	323.1	80.8						
04.07	Small scale aquaculture development and promotion project		6.1 8.7 10.9 10.6 7.5	6.5 6.3 5.0 4.9 5.4	6.7 5.2 5.1 5.1 0.2	0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	95.8	23.9						
	Project cost		6.1 8.7 10.9 10.6 7.5	6.5 6.3 5.0 4.9 5.4	6.7 5.2 5.1 5.1 0.2	0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	95.8	23.9						
	Scaling-up cost		0.8 0.8 5.8 5.8 6.4	6.8 5.8 5.8 6.4	6.8 5.8 5.2 5.5 10.1	11.6 10.8 11.2 13.3 16.8 20.0 21.6 23.0 22.7 23.5	227.3	56.8						
	Project total		6.9 9.5 16.7 16.4 13.9	13.3 12.1 10.8 11.3	13.5 10.7 10.7 11.8	18.4 22.6 26.0 38.1 41.8 43.8 64.8 64.8 45.3 47.0	323.1	80.8						
04.08	Routine small scale aquaculture development		6.1 8.7 10.9 10.6 7.5	6.5 6.3 5.0 4.9 5.4	6.7 5.2 5.1 5.1 0.2	0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	95.8	23.9						
	Project cost		6.1 8.7 10.9 10.6 7.5	6.5 6.3 5.0 4.9 5.4	6.7 5.2 5.1 5.1 0.2	0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	95.8	23.9						
	Scaling-up cost		0.8 0.8 5.8 5.8 6.4	6.8 5.8 5.8 6.4	6.8 5.8 5.2 5.5 10.1	11.6 10.8 11.2 13.3 16.8 20.0 21.6 23.0 22.7 23.5	227.3	56.8						
	Project total		6.9 9.5 16.7 16.4 13.9	13.3 12.1 10.8 11.3	13.5 10.7 10.7 11.8	18.4 22.6 26.0 38.1 41.8 43.8 64.8 64.8 45.3 47.0	323.1	80.8						
T3	Economic growth and livelihood improvement		1.1 0.4 0.4 0.4 0.4	0.4 0.4 0.6 0.4 0.4	0.4 0.4 0.4 0.4 0.4	0.4 0.4 0.4 0.4 0.4	0.4 0.4 0.4 0.4 0.4	10.7	2.7					
	Project cost		1.1 0.4 0.4 0.4 0.4	0.4 0.4 0.6 0.4 0.4	0.4 0.4 0.4 0.4 0.4	0.4 0.4 0.4 0.4 0.4	0.4 0.4 0.4 0.4 0.4	10.7	2.7					
	Scaling-up cost		0.4 0.8 0.8 0.8 1.1	0.4 0.8 0.8 1.1 1.1	1.4 1.2 1.1 1.1 1.1	2.1 2.1 2.2 2.2 2.4 2.9 3.0 3.2 3.4 4.0	35.2	8.8						
	Theme total		1.1 0.4 0.4 0.4 0.4	0.4 0.4 1.0 1.2 1.2	1.8 1.6 1.4 1.4 1.4	2.5 2.5 2.6 2.6 2.8 3.3 3.4 3.6 3.7 4.4	46.0	11.5						

Subsector	Development Theme Project ID	Project name	SSP/USD = 4.00																																
			Phase I	Phase II	Phase III	Phase IV	SSP (million)	USD (million)																											
			15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40								
T4	04.09	Project cost	1.1	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	10.5	2.6					
		Scaling-up cost																																	
		Project total	1.1	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	10.5	2.6					
	04.10	Project cost																																	
		Scaling-up cost																																	
		Project total																																	
	04.11	Project cost																																	
		Scaling-up cost																																	
		Project total																																	
	04.12	Project cost																																	
Scaling-up cost																																			
Project total																																			
T4 Agriculture sector transformation	Project cost																																		
	Scaling-up cost																																		
	Theme total																																		
04.13	Project cost																																		
	Scaling-up cost																																		
	Project total																																		
04.14	Project cost																																		
	Scaling-up cost																																		
	Project total																																		
04.15	Project cost																																		
	Scaling-up cost																																		
	Project total																																		
04.16	Project cost																																		
	Scaling-up cost																																		
	Project total																																		
T5 Institutional development	Project cost																																		
	Scaling-up cost																																		
	Theme total																																		
04.17	Project cost																																		
	Scaling-up cost																																		
	Project total																																		
04.18	Project cost																																		
	Scaling-up cost																																		
	Project total																																		
04.19	Project cost																																		
	Scaling-up cost																																		
	Project total																																		

5.3 Project Location Map

Nation-wide Projects

- 04.01 Fisheries and aquaculture law project
- 04.04 Fisheries information and fisheries resource management systems development project
- 04.09 Development of urban fish market infrastructure project
- 04.11 Private sector establishment of ice production facilities
- 04.14 Private sector promotion of value adding for local and export markets
- 04.15 South Sudan national fisheries competent authority project
- 04.20 Private sector fisheries and aquaculture technical training project
- 04.21 Regional fisheries and aquaculture research project
- 04.23 States aquaculture training project
- 04.24 States fisheries services capacity development project

States Projects (Upper Nile, Jonglei, Unity, Lakes, Western Equatoria, Central Equatoria)

- 04.12 Private sector promotion of large scale commercial aquaculture
- 04.22 Strengthening of fisheries and aquaculture research project

States Projects (Upper Nile, Jonglei, Unity, Lakes, Central Equatoria)

- 04.02 Micro credit for fishing communities project
- 04.03 Prevention of HIV infection in fishing communities project
- 04.13 Development of fish landing site infrastructure project
- 04.19 Fishers and fisheries communities training project

States Project (Upper Nile, Jonglei, Western Equatoria, Central Equatoria)

- 04.10 Private sector establishment of feedmills for aquaculture

States Project (Jonglei)

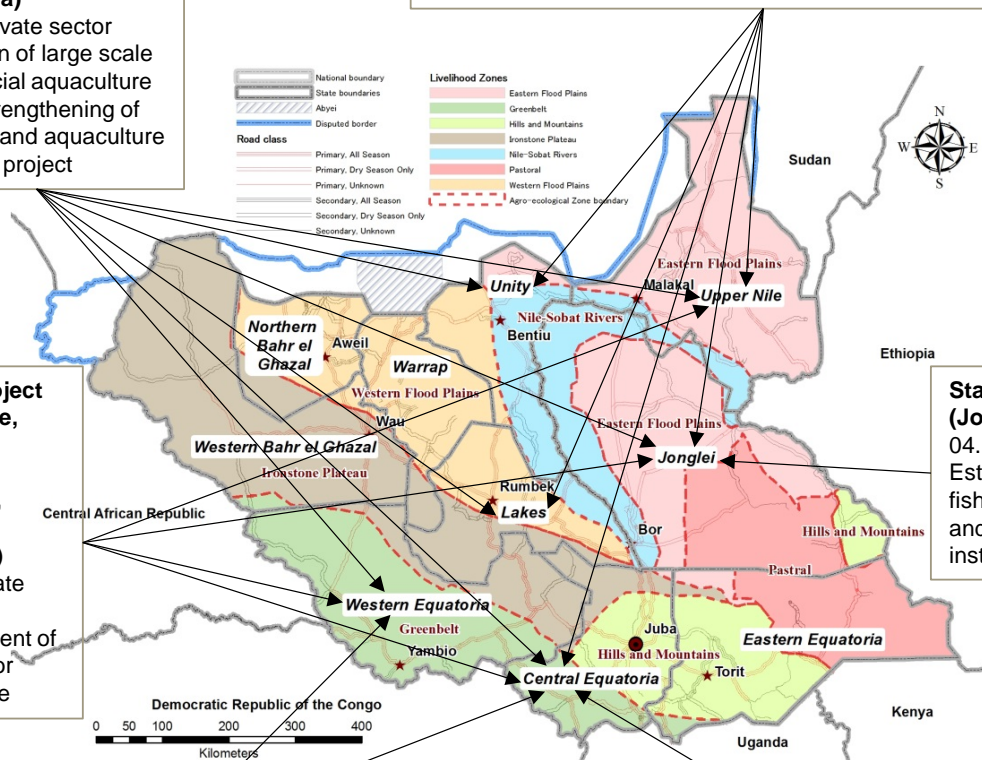
- 04.17 Establishment of fisheries training and research institute project

States Projects (Western Equatoria, Central Equatoria)

- 04.05 Private sector promotion of small scale aquaculture investment
- 04.07 Small scale aquaculture development and promotion project

States Project (Central Equatoria)

- 04.18 Establishment of national aquaculture research and training centre project



5.4 Project Profiles

5.4.1 Fisheries and aquaculture law project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Fisheries		
(2) Project name:	Fisheries and aquaculture law project		
(3) Project ID:	0 4 . 0 1 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2015/16	Ending FY: 2016/17	Duration (years): 2
(5) Total investment:	SSP 1,510,000	USD 377,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FI.SA1	Policy and legal framework development	Table 2-3
(2) Government organisation:	06	MAR-FA	Directorate of Fisheries and Aquaculture Development	Table 2-6
	01	MAR-PL	Directorate of Planning	Table 2-6
(3) Activity types:	101	ID-LI	Institutional development - Legal and institutional development	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	X
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	X
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	X
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/15-2020/21, 5 years)	X
	02	PH2	Phase II (2020/21-2025/26, 5 years)	
	03	PH3	Phase III (2025/26-2030/31, 5 years)	
	04	PH4	Phase IV (2030/31-2040/41, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>The law in South Sudan regarding fisheries and aquaculture is completely lacking. Currently the “law” as it is, is that of the Sudan, and was enacted many years ago. This is barely useful, being out of date, covering what is now a different country, and which in itself has serious shortcomings partly because it does not acknowledge the rights of the users of the resources to manage the resources, a plank of modern fisheries management, and an obligation under the constitution. This law is still being used as a basis for control of the fishery, particularly by the states’ extension officers, since there is no other.</p> <p>Regulations were also promulgated under this law, and like the law, are in urgent need of revision to bring them up to date.</p> <p>A new law has been prepared and issued in draft as the 2012 version (but is only a draft 2006 version with the date changed). This draft¹⁶⁰ is completely unsuitable for many reasons. It is not possible to merely adapt or rework this draft law as it is so seriously deficient in so many ways, and it must be abandoned.</p> <p>There is a danger that the states will begin to develop their own legislation and regulations, as has already happened in Jonglei State, and it is essential that these state laws and regulations are consistent with those of GRSS.</p> <p>Capture fisheries is a sector that is predicted to expand rapidly in the next 25 years, with aquaculture also becoming a significant contributor to food supply, employment and economic growth. To control both of these sectors good laws and wise regulations are needed.</p> <p>The GRSS is obligated under various international treaties to implement good management of fisheries, regard for the ecosystem, control of introductions and transfers of organisms, to uphold good processing and aquaculture practice and take on many other responsibilities. Primary amongst these obligations is to follow the FAO Code of Conduct for Responsible Fisheries, including the Ecosystem Approach to Fisheries Management, the Precautionary Approach to Fisheries Management, and various other Codes of Practice. All of these need to be integrated into the new legislation and regulations.</p> <p>For these reasons there is an urgent need to completely rewrite the fisheries laws and regulations of the South Sudan, which can also be used as a template for the States Governments to follow, so their laws and regulations are consistent with the national laws and international and regional obligations.</p> <p>Fisheries law is a very specialised branch of law, and requires drafting by a specialist, not a generalist. For this reason a discrete project dedicated to Fisheries and Aquaculture is proposed.</p>
(2) Objectives:	<p>The objective of the project is to produce a comprehensive National Fisheries and Aquaculture Law of South Sudan with appropriate fisheries regulations for adoption by the legislature</p>
(3) Overall description including temporal and spatial extent of project:	<p>To redraft the law will require an international specialist to visit South Sudan three times over a 15 month period and the Directorate of Fisheries and Aquaculture Development to undertake a period of follow up to get the law gazetted and the regulations signed into law. The International Expert will work closely with the legal officer in the Directorate of Fisheries and Aquaculture Development (DoFAD), the South Sudan Law Reform (Review) Commission, States Governments and the private sector.</p> <p>A locally recruited counterpart to the International Expert will assist in the administration and logistics of the project, based in Juba but travelling as required to the states.</p> <p>A DoFAD staff member will be expected to be provided by the MLFI to assist the TA team to implement the project.</p> <p>Stakeholder workshops in 3 states and a similar workshop in Juba are envisaged. A validation workshop in Juba will also take place during the final visit of the International Expert.</p> <p>The project will cover all states though the International Expert would be expected only to</p>

¹⁶⁰ It is a copy of a fisheries law of Kenya, The Laws of Kenya. Fisheries Act. Chapter 378 Revised Edition 1991 partially adapted for the South Sudan; but ignoring the actual situation in fisheries in South Sudan, and the constitution.

Items	Information
(4) Component structure:	<p>visit 3 states and Juba.</p> <p>Component 1: Recruitment of Specialists</p> <p>Component 2: Groundwork for Preparation of the National Fisheries and Aquaculture Law of South Sudan</p> <p>Component 3: Consultation process on the Preparation of the National Fisheries and Aquaculture Law of South Sudan</p> <p>Component 4: Validation of the National Fisheries and Aquaculture Law of South Sudan</p> <p>Component 5: Adoption of the National Fisheries and Aquaculture Law of South Sudan</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Recruitment of Specialists (3 months)</p> <p>Activity 1.1: Recruitment of International Fisheries Law Specialist (3 inputs over 15 months. Total 4 months; 3 in SS over two visits and one month of home work) and recruitment of South Sudanese Legal Assistant to the International TA</p> <p>Activity 1.2: Pre visit liaison with the DoFAD and MLFI (e-mail etc.)</p> <p>Activity 1.3: Purchase basic computer equipment (laptops/Printer)</p> <p>Outputs: Suitable TA staff selected and recruited</p> <p>Component 2: Groundwork for Preparation of the National Fisheries and Aquaculture Law of South Sudan. (4 months)</p> <p>Activity 2.1: International Fisheries Law Expert to visit South Sudan. (1 Month) and begin to draft outline of the National Fisheries and Aquaculture Law of South Sudan and suitable regulations to be enforced. Works with MLFI</p> <p>Activity 2.2: South Sudanese Legal Assistant to the International TA begins activities under the supervision of the International TA. DoFAD staff member assists both TA.</p> <p>Activity 2.3: Initial meetings in Juba with MLFI, DoFAD and other Ministries and Directorates</p> <p>Activity 2.4: Preparation of schedule of workshops and visits</p> <p>Activity 2.5: Visits to States by Legal Assistant. Arrangement of venues, participants list, (25 participants per workshop) accommodation and other administrative necessities for the National Fisheries and Aquaculture Law of South Sudan workshops to be held in 3 States.</p> <p>Activity 2.6: Arrangement of venue, participants list (30 participants, 2 days each), accommodation and other administrative necessities for the National Fisheries and Aquaculture Law of South Sudan workshop to be held in Juba (Legal Assistant to International TA)</p> <p>Outputs: Schedule of work. Details of arrangements for 3 stakeholder workshops in the states and one in Juba, including choice of states. Participants lists for all workshops. Outline draft of the National Fisheries and Aquaculture Law of South Sudan and associated regulations</p> <p>Component 3: Consultation process on the Preparation of the National Fisheries and Aquaculture Law of South Sudan (3 months).</p> <p>Activity 3.1: International Fisheries Law Specialist to visit South Sudan (2 months total consisting of 1 month in South Sudan and 1 month home work)</p> <p>Activity 3.2: National Fisheries and Aquaculture Law of South Sudan workshops held in 3 states</p> <p>Activity 3.3: National Fisheries and Aquaculture Law of South Sudan workshop held in Juba</p> <p>Activity 3.4: Incorporation of results of workshops incorporated into a first draft National Fisheries and Aquaculture Law of South Sudan and list of regulations produced. (International TA and Legal Assistant joint responsibility)</p> <p>Activity 3.5: Production and distribution of the first draft of the National Fisheries and Aquaculture Law of South Sudan and the Fisheries and Aquaculture Regulations to all states and all interested ministries, Departments, DPs and NGOs. Included also participants at States Workshops and the Juba Workshop Possibly 150 copies. Calls for comments on the first draft (Legal assistant to arrange).</p> <p>Activity 3.6: Constant follow up (by Legal Assistant) with recipients of the first draft of the National Fisheries and Aquaculture Law; and comments and recommendations made on the first draft National Fisheries and Aquaculture Law of South Sudan</p> <p>Activity 3.7: Arrangement of venue, participants list, (40 participants, 2 days) accommodation and other administrative necessities for the National Fisheries and Aquaculture Law of South Sudan validation workshop to be held in Juba (Legal Assistant to International TA to arrange)</p> <p>Outputs: 4 workshop reports. Draft of National Fisheries and Aquaculture Law of South Sudan and associated regulations incorporating the results of the 4 workshops. Distribution of 150 copies of the draft of National Fisheries and Aquaculture Law of South Sudan and associated regulations to interested stakeholders</p> <p>Consolidated list of further comments on the draft.</p>
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Items	Information
	<p>Component 4: Validation of the National Fisheries and Aquaculture Law of South Sudan (2 month, six months after Activity 3.5)</p> <p>Activity 4.1: International Fisheries Law Specialist to visit South Sudan (1 month)</p> <p>Activity 4.2: National Fisheries and Aquaculture Law of South Sudan validation workshop held in Juba (2 days)</p> <p>Activity 4.3: Amendments made to produce Draft Final National Fisheries and Aquaculture Law of South Sudan and associated regulations in Fisheries and Aquaculture, reflecting the results of the validation workshop. (International TA and Legal Assistant joint responsibility)</p> <p>Activity 4.4: Distribution of Draft Final National Fisheries and Aquaculture Law of South Sudan and associated regulations, to all states and all interested ministries, Departments, DPs and NGOs. Included also participants at States Workshops and the Juba Workshop. Possibly 150 copies. (Legal Assistant to arrange)</p> <p>Outputs: Workshop report. Final draft of the National Fisheries and Aquaculture Law of South Sudan and associated regulations, the final draft to be consistent with current fisheries and aquaculture management practice, local cross cutting legislation, and Regional and International obligations.</p> <p>Component 5. Adoption of the National Fisheries and Aquaculture Law of South Sudan</p> <p>Activity 5.1: Presentation by MLFI of the National Fisheries and Aquaculture Law of South Sudan to the legislature for adoption as a legal document in the South Sudan</p> <p>Activity 5.2: Adoption and signing into law of the Fisheries and Aquaculture Regulations by the Minister responsible.</p> <p>Outputs: Gazetted National Fisheries and Aquaculture Law of South Sudan. Application of fisheries and Aquaculture Regulations</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	International TA Locally recruited Legal Assistant DoFAD
(2) Description of beneficiaries within the framework of the project:	<p>During the period of the implementation of the project the direct beneficiaries will be:</p> <ul style="list-style-type: none"> the states and national staff who have been exposed to the development of the legislation and regulations and have thus acquired knowledge of the process of developing legislation and regulations and what should be included. This will improve their ability to develop and design legislation and regulations in the states and elsewhere in the future. <p>In the long term the beneficiaries will be:</p> <ul style="list-style-type: none"> all those involved in the capture fisheries and aquaculture industries of the South Sudan, National and States, who will benefit from a well managed and regulated industry, maximising fish catch for nutrition, income earning opportunities and employment. Administrations who have to manage the fisheries and aquaculture of the nation will benefit since they will have appropriate and modern laws to help them carry out their responsibilities and guide their actions.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	The major impact of the project will be on the management and control of fisheries and aquaculture in the country. The legal basis for this is currently weak, and a clear and modern National Fisheries and Aquaculture Law for South Sudan and up-to-date Fisheries and Aquaculture regulations will give the DoFAD and the States Governments the enabling legal basis on which to manage capture fisheries sustainably into the future, and control activities in aquaculture. This will become more and more important as time passes and the capture fisheries and aquaculture industries expand and make greater contributions to the economy.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: a Positive: d</td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: a Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: a Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> This is a purely executive project and will have negligible environmental or social impact during the 15 months it takes to complete. <p>(Positive)</p> <ul style="list-style-type: none"> Once complete the project will have provided the law on which to base the management of the fish resources of the South Sudan, allowing conservation measures to ensure its sustainability to be taken, control of aquaculture development, post harvest regulations 		

Items	Information
	enacted, etc. This will have a significant positive impact in the long term.
2.6 Monitoring and evaluation for impact measurement	
(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • Presence or absence of a comprehensive and modern National Fisheries and Aquaculture Law for South Sudan and up-to-date Fisheries and Aquaculture regulations. • There is currently no appropriate Fisheries Law in South Sudan, and no up-to-date Fisheries and Aquaculture Regulations.
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • Presence or absence of a comprehensive and modern National Fisheries and Aquaculture Law for South Sudan. • A modern National Fisheries and Aquaculture Law for South Sudan has been prepared and is awaiting gazetting. • Appropriate Fisheries and Aquaculture Regulations have been drafted and await Ministers approval.
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> • Project reports • MLFI annual report
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> • Project management/International TA • MLFI Implementation Unit and DoFAD
2.7 Required human resources	
(1) Principle of human resources management:	International and local Technical Assistance to the DoFAD
(2) Required human resources in the public sector (Positions, grades and numbers):	Assistance from DoFAD existing staff, as part of their responsibilities. One DoFAD staff member to be assigned to the TA team to assist as required throughout the 15 months of the project implementation.
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>1 International TA Fisheries Law Specialist 3 visits to South Sudan of one month and one month work at home (4 months in all). Appropriate qualification in law and suitable experience in drafting Fisheries Law and regulations, preferably in Africa</p> <p>1 Legal Assistant for 15 months continuous in South Sudan, from start to end of project. South Sudanese National, with organisational ability, and a good working knowledge of administration of projects and programmes in South Sudan. Some experience in legal work would be an advantage.</p>
2.8 Risk assessment with respect to project objectives and resources to be applied	
(1) Expected level of risk:	L L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	<ul style="list-style-type: none"> • Civil disturbances leading to delay in implementation • Lack of buy in from states or MLFI • Slow process of gazetting the Final Draft of the National Fisheries and Aquaculture Law for South Sudan • No particular environmental or social concerns
2.9 Other special considerations and/or notes	
(1) Other special considerations and/or notes:	The computer equipment will be handed over to the CAMP Secretariat at the completion of the project.
2.10 Routine operation and required resources after the completion of the project	
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>The Fisheries and Aquaculture regulations will have to be modified as time goes by, to cover new or changing circumstances in the fisheries or aquaculture sectors. Regulations merely require the Minister responsible to sign them into force.</p> <p>The legislation will have to be reviewed every 10 – 15 years, particularly to keep up with changes in International Treaties and Agreements.</p> <p>States Governments will be expected to use the National Fisheries and Aquaculture Law for South Sudan and the accompanying regulations as a basis when writing their own state laws and regulations. This will be done by their legal departments in consultation with the States MARFs.</p>

Part 3: Project cost estimation

Project duration	SSP/USD = 4												Total	% to total															
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27			27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000	total
1 Management and operation of project	795	703																									1,497	374	99%
1 Deployment of government staff																											23	6	1%
2 Procurement of administrative services (contracted)																											11	3	1%
1 Print (& distribution) of the first draft																											11	3	1%
2 Print (& distribution) of the final version																											11	3	1%
3 Procurement of professional services (contracted)	592	592																									1,184	296	78%
1 International consultant (law expert)	252	252																									504	126	33%
2 Local consultant (law assistant)	340	340																									680	170	45%
4 Implementation of staff training	203	88																									291	73	19%
1 Workshops in 3 states (per diem)	203																										203	51	13%
2 Juba workshop (venue)		24																									24	6	2%
3 Juba Validation Workshop (transportation)		24																									24	6	2%
4 Juba Validation Workshop (per diem)		40																									40	10	3%
5 Implementation of research, studies and surveys																													
6 Delivery of extension and training services to the private sector																													
7 Operation and maintenance																													
2 Construction of infrastructure and procurement of equipment	13																										13	3	1%
1 Construction of office buildings																													
2 Construction of research, training and other specialized buildings																													
3 Construction of feeder roads																													
4 Construction of production, market and transportation facilities																													
5 Acquisition of land																													
6 Procurement of vehicles																													
7 Procurement of equipment	13																										13	3	1%
1 PC	4																										4	1	0%
2 Printer	4																										4	1	0%
3 Copier	4																										4	1	0%
4 Software	1																										1	0	0%
3 Subsidies, equity and loans																													
1 Provision of cash and/or in-kind subsidies																													
2 Provision of training services to the private sector																													
3 Equity investments																													
4 Provision of loans																													
5 Social assistance/donation (Emergency)																													
Total (SSP '000)	807	703																									1,510	377	100%
Total (USD '000)	202	176																									53%	47%	
% to total																													

Public sector project
Routine work by government

Private sector project
Routine work by private sector

5.4.2 Micro credit for fishing communities project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Fisheries		
(2) Project name:	Micro credit for fishing communities project		
(3) Project ID:	04.02 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2021/22	Ending FY: 2030/31	Duration (years): 10
(5) Total investment:	SSP 60,761,000	USD 15,190,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FI.SA1	Fisheries management and productivity enhancement	Table 2-3
(2) Government organisation:	06	MAR-FA	Directorate of Fisheries and Aquaculture Development	Table 2-6
(3) Activity types:	205	SP-CR	Service delivery/infra devolvement – Provision of Credit	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	X
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	
	82	NB	Northern Bahr el Ghazal State	
	83	WB	Western Bahr el Ghazal State	
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	
	92	CE	Central Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/15-2020/21, 5 years)	
	02	PH2	Phase II (2020/21-2025/26, 5 years)	X
	03	PH3	Phase III (2025/26-2030/31, 5 years)	
	04	PH4	Phase IV (2030/31-2040/41, 10 years)	
(6) Livelihood Zone:	01	EFB	Eastern Flood Plains	
	02	GBT	Greenbelt	
	03	HAM	Hills and Mountains	
	04	ISP	Ironstone Plateau	
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	
	32	DPL	Development partners loans and equity financing	X
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Part 2: Project description

Items	Information
<p>2.1 Project justification, objectives, overall description and component structure</p> <p>(1) Justification:</p>	<p>Credit is necessary for the sustained development of the small fisheries sector and microfinance is a practical solution to the growing demand for financial services but most banks have a business culture that is not geared to service the poor, low income (mainly) rural fisheries microenterprises.</p> <p>Direct subsidies to capture fisheries are frowned on and are indeed considered detrimental to effective resource management. Subsidies for construction of new fishing vessels and subsidies for operating costs of fishing in particular have come under scrutiny at the Doha round of the World Trade Organisation and the FAO has pronounced most subsidies undesirable given the fact that 87% of the worlds' fisheries are over-exploited, fully exploited, significantly depleted or recovering. Micro finance for fishermen in the Nile Sobat Rivers Livelihood Zone would not be considered a subsidy, because it would not be used either for new vessels or for direct operating costs.</p> <p>Microfinance projects such as this enable the poor to smooth their consumption patterns, manage their risks, build their assets gradually, develop their microenterprises, enhance their income earning and enjoy an improved quality of life. It would also be hoped that the project, though the loans, would supply seed money for many small businesses, particularly those run by women or women's groups.</p> <p>Governments everywhere have shied away from direct lending to fisheries; a task presumed to be the responsibility of banks and other financial institutions but the financial sector is still in its infancy in South Sudan and, even then, the few banks involved in rural lending in South Sudan have often avoided the industry because of the lack of assets against which to guarantee loans, and the supposedly fickle nature of the people engaged in the industry.</p> <p>The major problems remain:</p> <ul style="list-style-type: none"> • No banking services or any Financial Institutions (FIs) in most of the Nile Sobat. • There is no specialized public bank or other financial vehicle in South Sudan that extends retail services to fishermen. • Very limited access to both formal and informal credit among the enterprising, labouring and low income fishermen; • Perceived lack of viable and profitable fisheries projects and the attendant risks (e.g. weather aberrations; business and financial risks; civil disturbance risks; market risks). <p>Fishermen and fishing families are not considered creditworthy mainly because:</p> <ul style="list-style-type: none"> • they lack physical and livelihood assets, including land that can be used as collateral; • they do not possess recognised technical or technology expertise; • they tend to be more individualistic, are not functionally organized, are geographically dispersed and have not got critical mass to warrant economies of scale in production, marketing and post harvest handling operations, so are small operators; • they are perceived as not having good credit history, and • the banks do not have a reliable database on their financial status, livelihood characteristic and capacity to pay. <p>For a flourishing, inclusive financial sector, three things are indispensable: security, economic activity and population stability. South Sudan lacks all of these. However whilst security is a problem, fishing communities have both population stability (only 8% of fishing households surveyed by CAMP in 2013 migrated) and constant economic activity, so that as time passes and security improves these communities will be ideal targets for microfinance.</p> <p>The project will have to adopt a holistic household cash flow approach in assessing the capacity to pay of a fisherman borrower in lieu of collateral. This way, sources of income other than from fisheries production will be considered and would boost the considered loan and capacity to pay of fishermen borrowers. Most fishing households have sources of income outside fisheries and many have assets such as cows, other livestock or agricultural produce which could be considered as income earning and used in assessment of loan suitability.</p> <p>Whilst 80% of fishing households surveyed by CAMP in 2013 had access to informal credit in the form of a Sunduk¹⁶¹, relatives or other informal sources (CAMP 2013), none had a bank account.</p> <p>The penetration of mobile phones, 39% of fishing households had access to¹⁶² a mobile</p>

¹⁶¹ A Sunduk is a revolving fund used as a savings vehicle by rural communities. There are several manifestations of sunduks, but they all involve a group of people regularly paying into a pot which is regularly distributed to one individual member.

Items	Information
	<p>device in 2013, is likely to increase, and with the imminent introduction of mobile banking through mobile phones this will alter the dynamics of microfinance in rural areas.</p> <p>Current thinking is that microfinance alone is not as effective as microfinance supported by support for savings. As the project progresses support for savings may be appropriate as an additional activity.</p>
(2) Objectives:	To provide micro-credit to fishing communities in the Nile Sobat River ecological zone.
(3) Overall description including temporal and spatial extent of project:	<p>The project is expected to last for 10 years.</p> <p>Loans will be made by a licensed NGO in the Nile Sobat Livelihood Zone, which stretches along the Sobat from Akobo on the Ethiopian Border to the junction with the Nile near Dolieb Hill, and down the Nile from Malakal to Terekeka.</p> <p>The NGO will be expected to provide:</p> <ul style="list-style-type: none"> • Tools, training, and dedicated staff support to provide greater certainty that loans are properly used. • Consistent pricing for all borrowers • Dedicated resources to address their specific needs <p>The project is expected to disperse loans to the value of US\$10,000,000 over 10 years in amounts of up to \$1500 (exceptionally) but more usually between US\$50 – 250. The purpose of these loans will be to improve the life of people living in fishing communities so that they play a more active part in the industry.</p> <p>Community Based Lending systems will be developed and lending to or through established groups will be the major conduit for the microfinance; these generally provide more stability and there is peer pressure for repayment. However, loans will also be made to individuals, if they pass strict criteria.</p> <p>Whilst it is anticipated that the loans will be mostly for fisheries and fish processing related equipment and capital for running costs of small businesses this will not necessarily be the case in all loans.</p> <p>As time goes by the utility of developing a savings based component of the project will be analysed and if considered beneficial will be incorporated into project activities.</p> <p>The project will be audited and monitored by an external consultant.</p>
(4) Component structure:	<p>Component 1: Appointment of both implementing and monitoring agents</p> <p>Component 2: Disbursement of micro-credit loans</p> <p>Component 3: Final evaluation</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1: Appointment of both implementing and monitoring agents (1 year)</p> <p>Activity 1.1: Select an appropriate body to disperse micro credit loans in the Nile Sobat. It is most unlikely that a commercial bank will wish to undertake this activity so a specialist micro credit NGO will have to be utilised</p> <p>Activity 1.2: Appoint a suitable consulting company (probably an accountancy firm) to monitor and annually audit the NGOs activities so as to avoid misuse of funds.</p> <p>Outputs: Two tenders and two contracts, one for implementation, and one for monitoring and audit</p> <p>Component 2: Disbursement of micro-credit loans (9 years)</p> <p>Activity 2.1: Disperse the loan fund to fishing community members in the Nile Sobat.</p> <p>Activity 2.2: Monitor and annually audit activities.</p> <p>Outputs: Correct disbursement of micro-credit loans. Monitoring reports and annual audit report</p> <p>Component 3: Final evaluation (3 months, at the end of the 9 year period of Component 2)</p> <p>Activity 3.1: Review the success of the project and provide a final audit of activities.</p> <p>Outputs: Final review and audit reports</p>
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2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<p>1 credit orientated NGO</p> <p>1 consulting company for monitoring and audit (probably an accountancy firm)</p>
(2) Description of beneficiaries within the framework of the project:	Fishing communities in the Nile Sobat river ecological zone

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

¹⁶² Ownership of mobile phones is lower, in that many family groups have only one phone used by many.

Items	Information
(1) Outcomes and impact:	<p>US \$10,000,000 of micro-credit is disbursed in the Nile Sobat region allowing fishers, processors and transporters of fish to increase production, increase value and improve quality.</p> <p>The micro-credit scheme will enable the fishing communities access to equipment and materials that they were not able to obtain prior to the project. This includes:</p> <ul style="list-style-type: none"> • Fishing gears • Outboards • Materials for Chokor fish smokers • Materials and inputs for drying and salting • Insulated boxes • Bicycles and motorbikes to market the catch • Bridging loans for emergencies (health, school fees, funerals etc) • The loans for the larger items may be made through groups and co-operatives.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: a</td> <td>Project:</td> </tr> <tr> <td>Positive: c</td> <td>a: is likely to have minimal or little impact on the environment and/or society</td> </tr> <tr> <td></td> <td>b: may have an impact on the environment and/or society</td> </tr> <tr> <td></td> <td>c: is likely to have a significant impact on the environment and/or society</td> </tr> <tr> <td></td> <td>d: will have a significant impact on the environment and/or society</td> </tr> </table>	Negative: a	Project:	Positive: c	a: is likely to have minimal or little impact on the environment and/or society		b: may have an impact on the environment and/or society		c: is likely to have a significant impact on the environment and/or society		d: will have a significant impact on the environment and/or society
Negative: a	Project:										
Positive: c	a: is likely to have minimal or little impact on the environment and/or society										
	b: may have an impact on the environment and/or society										
	c: is likely to have a significant impact on the environment and/or society										
	d: will have a significant impact on the environment and/or society										
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • There will be almost no environmental impact from the project activities • Project activities may have future negative impacts, due to an unregulated expansion of fishing activities: a) contribute to overfishing of the fish resources of the Nile Sobat rivers livelihood zone, b) negatively affect the Sudd wetland (RAMSAR site) and c) contribute to deforestation due to the cutting of trees to provide firewood for smoking fish. • These will be mitigated against by proper management measures being introduced by the MLFI and States, so as to avoid overfishing and promote co-management by the users of the resources. <p>(Positive)</p> <ul style="list-style-type: none"> • A positive social impact is that the project will contribute to gender equality in that many loans will be made to women and women's groups, for processing and marketing, improving their status in society and their employment. • Additionally the project will bring many individuals into the banking/savings sector, improving their financial acumen (through credit camps and training) and enabling businesses to grow and contribute more to the local economy. • The project will ultimately: a) contribute to employment in the region, b) Improve the local cash economy as more fish is sold and quality and prices increase and c) Improve credit availability in the Nile Sobat. 										

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	Indicator: Amount of credit disbursed in the Nile Sobat to fishing communities Starting point: None
(2) Measurable indicators and situation at the end point:	Indicator: Amount of credit disbursed in the Nile Sobat to fishing communities End point: \$10,000,000
(3) Methods of measurement and sources of information:	Absolute value of loans disbursed. Absolute numbers of successful and performing loans From lenders reports and annual monitoring and audit reports
(4) Responsible parties for the monitoring and evaluation:	Consultant responsible for monitoring DP MLFI – CAMP Secretariat

2.7 Required human resources

(1) Principle of human resources management:	Sub-contracts
(2) Required human resources in the public sector (Positions, grades and numbers):	None. MLFI routine overview, through monitoring contractors reports, and NGOs reports
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	Assessed by the contractors.

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	H L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	<ul style="list-style-type: none"> • Security: many of the areas are remote and costs associated with extending credit to these areas may be great. Use of mobile telephones should reduce this risk • Security: the area is subject to much instability which may make access difficult • Difficulties in finding an appropriate NGO to implement the project

Items	Information
	<ul style="list-style-type: none"> • Unfamiliarity of intended beneficiaries with the cash economy and micro-loan finance • Corruption and informal taxation in states and counties preventing proper disbursement • Simple logistics in remote areas

2.9 Other special considerations and/or notes

<p>(1) Other special considerations and/or notes:</p>	<p>It should be noted that micro-credit is an extremely difficult and costly financial instrument to implement. In the remote Nile/Sobat region the costs are likely to be very high indeed. This is why the costs for dispersing and monitoring the \$10,000,000 over 9 years are calculated as 40% of the amount disbursed - \$4,000,000, with another \$1,000,000 for monitoring and evaluation.</p> <p>Credit camps will have to be organised and run, the distances are long and much of the area is accessible only by boat, developing the systems of repayment through the mobile phone network is difficult and the recipients not currently much used to the cash economy. Very close contact with the recipients of loans has to be maintained, which means a lot of agents on the ground monitoring and following up. These people are expensive. (This is also why many commercial banks shun micro-credit. Too expensive to administer).</p>
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2.10 Routine operation and required resources after the completion of the project

<p>(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.</p>	<p>The portfolio of loans and funds remaining will be passed to the Central Bank of South Sudan on completion of the project, but they may seek to continue the project on the same terms as before on a diminishing fund basis as costs gradually eat up the loan portfolio.</p>
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Part 3: Project cost estimation

Project duration	SSP/USD = 4												Total	% to total															
	Phase 1		Phase 2		Phase 3		Phase 4		Phase 5		Phase 6				SSP '000 USD '000	total													
Cost group	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40				
1 Management and operation of project																													
1 Deployment of government staff																													
2 Procurement of administrative services (contracted)																													
3 Procurement of professional services (contracted)																													
1 International consultant (project officer)																													
2 Monitoring & Evaluation																													
3 NGO for disbursement of micro credit																													
4 Implementation of staff training																													
5 Implementation of research, studies and surveys																													
6 Delivery of extension and training services to the private sector																													
7 Operation and maintenance																													
2 Construction of infrastructure and procurement of equipment																													
1 Construction of office buildings																													
2 Construction of research, training and other specialized buildings																													
3 Construction of feeder roads																													
4 Construction of production, market and transportation facilities																													
5 Acquisition of land																													
6 Procurement of vehicles																													
7 Procurement of equipment																													
1 Office ICT equipment																													
3 Subsidies, equity and loans																													
1 Provision of cash and/or in-kind subsidies																													
2 Provision of training services to the private sector																													
3 Equity investments																													
4 Provision of loans																													
1 Micro credit																													
5 Social assistance/donation (Emergency)																													
Total (SSP '000)																													
Total (USD '000)																													
% to total																													

Public sector project
Routine work by government

Private sector project
Routine work by private sector

5.4.3 Prevention of HIV infection in fishing communities project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Fisheries		
(2) Project name:	Prevention of HIV infection in fishing communities project		
(3) Project ID:	0 4 . 0 3 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2020/21	Ending FY: 2029/30	Duration (years): 10
(5) Total investment:	SSP 35,341,000	USD 8,835,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FI.SA5	Fisheries management and productivity enhancement	Table 2-3
(2) Government organisation:	06	MAR-FA	Directorate of Fisheries and Aquaculture Development	Table 2-6
(3) Activity types:	999	OTR	Public Health	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	X
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	
	82	NB	Northern Bahr el Ghazal State	
	83	WB	Western Bahr el Ghazal State	
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	
	92	CE	Central Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/15-2020/21, 5 years)	
	02	PH2	Phase II (2020/21-2025/26, 5 years)	X
	03	PH3	Phase III (2025/26-2030/31, 5 years)	
	04	PH4	Phase IV (2030/31-2040/41, 10 years)	
(6) Livelihood Zone:	01	EFPP	Eastern Flood Plains	
	02	GBT	Greenbelt	
	03	HAM	Hills and Mountains	
	04	ISP	Ironstone Plateau	
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	X
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

This is a project for a targeted HIV and AIDS awareness campaign for:

- fishing communities in the Nile/Sobat Livelihood Zone
- in fish processing and handling centers in Juba where the threat of HIV transmission is particularly high.

General awareness of HIV countrywide should be covered by national programs.

Fishermen and workers in fisheries related industries are far more likely than the general population to be affected by HIV. They are one of the “Most At Risk Populations” (MARPs). This is related partly to mobility, making fishing communities and freight transporters more vulnerable to infection with HIV. The results of HIV infections are devastating. Fishing households in which one or more people are affected by AIDS have reduced income, spend their savings on medical care, sell their productive assets (such as fishing equipment and cows) and withdraw their children from school. Their poverty deepens, their food security decreases and their general vulnerability increases.

There are many factors that make fishing communities vulnerable to HIV. Susceptibility to HIV is determined by complex combinations of biological, social, cultural and economic factors, and several known HIV risk factors occur in many fishing activities. This vulnerability stems from the nature and dynamics of the fish trade and fishing lifestyle in which a number of known or hypothesised risk factors converge¹⁶³.

- Many people in fishing communities are mobile or migratory and the social structures that constrain sexual behaviour in more stable communities may not apply.
- Cash income, poverty, irregular working hours and being away from home, place fishermen in a group with disposable income and time off (when not fishing), that favours the consumption of alcohol and prostitution; the corollary of this is that low income women are drawn to landing sites precisely because of the opportunities to sell food, alcohol or sex.
- Alcohol use and other drugs are widespread among fishing communities in many parts of the world to help cope with the dangers or stresses of their occupation. Research has shown that alcohol consumption is associated with having multiple partners and inconsistent condom use.
- There are limited health services due to both geographical remoteness and inaccessibility. In addition, low levels of education in these populations exacerbate the difficulties in providing preventive medicine, diagnoses and treatment .
- Fishing is a high risk occupation which can contribute to a culture of risk denial or risk confrontation, extending to displays of bravado and risk taking in the social and sexual arena.
- Fishing communities are often socially marginalised and potentially seen to have low status, which can cause among men exaggerated or oppositional forms of masculinity.
- In addition, fishing communities are vulnerable to HIV due to inadequate prevention, treatment and mitigation measures.

No specific data exists on HIV or AIDS in fishing communities, neither in the fisheries administration of GRSS nor the SMARFs. The only guidance for fisheries is what has happened in neighbouring countries in the past. This is not reassuring. Fishermen are five times more likely to die of AIDS-related illness than farmers in the Lake Victoria region. A study in nine sub Saharan African countries in 2005 showed that people from fishing communities were 4.4 to 14.0 times more likely to have HIV than the general population. The prevalence of HIV in 2005 in fishing communities was 20.3% in DRC, 30.5% in Kenya and 24.0% in Uganda, 4.8, 4.5 and 5.8 times higher, respectively, than in the general population. (See <http://www.kmcc.org.ug>)

In South Sudan there is a worrying trend of alcohol becoming available to fishing camps, and particularly where those camps are made up of men away from their families, risk taking behaviour can be widespread.

CAMP has found that within GRSS MLFI and SMARFs there is widespread ignorance of HIV.

The CAMP fisheries subsector household survey data, where fishing households were questioned on HIV awareness, showed that the majority of fishing households (more than 90%) had not received any visits from health care professionals related to HIV or AIDS, though more were aware of the disease but had no specific knowledge about it. Members

¹⁶³ This list is from KMCC Uganda, 2014. Most at Risk Populations Fishing Communities and HIV/AIDS in Uganda: Synthesis of Information and Evidence to Inform the Response. Synthesis Report, 2014. 40 pages. <http://www.kmcc.org.ug>

Items	Information
	<p>of fishing communities also held beliefs about HIV/AIDS that were plainly wrong, and based on misconceptions, prejudice and ignorance of the disease. Padak Fisheries Training Centre courses for fishermen do not presently include any specific advice on HIV.</p> <p>This is a very unsatisfactory state of affairs and bodes ill for the future of the fishing industry in South Sudan.</p> <p>GRSS MLFI is currently incapable of implementing strategies on its own due to lack of financial resources and insufficient skills amongst the staff.</p> <p>The intention is to use peer education to generate HIV awareness. Worldwide, peer education is one of the most widely used strategies to address the HIV/AIDS pandemic. Peer education typically involves training and supporting members of a given group to effect change among members of the same group, in this case fishermen and women in the Nile/Sobat area who catch and market fish in nearby towns, and workers in fish processing establishments in Juba. The choice of peer education is based on traditional methods of learning in fishing communities, through the spoken word in small groups. Written literature and formal education methods are less effective in this traditional environment.</p> <p>This project is in line with the WHO Global Health Sector Strategy for HIV 2011-2015; one of the key contributions being "scale-up and innovation in HIV prevention" through supporting "prevention intervention packages for key populations".</p>
(2) Objectives:	<p>The objective is to reduce HIV transmission to and within fishing communities as the fishing industry in South Sudan expands; avoiding the extremely negative situation regarding HIV and AIDS that has unfolded on Lake Victoria and elsewhere in commercial fisheries in Africa.</p>
(3) Overall description including temporal and spatial extent of project:	<p>The project will undertake a 10 year widespread HIV awareness campaign in fishing communities and fish processing operations in Juba and elsewhere and will be effected by subcontracting the whole work to an appropriate NGO after a restricted tender process</p> <p>It is anticipated that at least 220 existing fishing communities, fisheries co-operatives, and other fisheries organisations will be covered in the project activities and supported throughout the period of the project.</p> <p>In South Sudan it will be necessary to expand the peer education provided to include the diversity of behaviour change determinants through expanded dialogue, community mobilization, policy advocacy, and the provision of HIV-related services.</p> <p>The project must also incentivise the people chosen as peer educators through direct payments.</p> <p>All training programmes for peer educators will include the following elements:</p> <ul style="list-style-type: none"> • a preparatory meeting and retreat to enable peer educators to get to know each other and start working with project staff • imparting of formal knowledge on topics related to STIs and HIV/AIDS • a focus on personal development and cultural issues and biases • skills training; • continuing support, supplementary training, and assistance <p>The programme will also recognise the importance of special learning environments and messages for women, particularly where roles in traditional society are rigidly gender based.</p> <p>The main thrust of the project will be in the Nile Sobat rivers livelihood Zone, where the majority of commercial fishing in South Sudan is located. This stretches on each side of the Nile South from Malakal in Upper Nile State to Terekeka in Central Equatoria State, and along the Sobat River from the junction of the Nile/Sobat, eastwards past Nassir to Akobo on the Ethiopian border.</p> <p>Additionally the project will cover fish processing factories in Juba and elsewhere when they are established.</p> <p>It would be hoped that the sub-contractor will make use of the staff and facilities at the Padak FTC wherever possible.</p>
(4) Component structure:	<p>Component 1: Preparation of tender documents for Prevention of HIV in Fishing Communities Project</p> <p>Component 2: Implementation of Prevention of HIV in Fishing Communities Project</p>

2.2 Detailed description of project component, activity and outputs

Items	Information
(1) Component, activity and outputs:	<p>Component 1: Preparation of tender documents for Prevention of HIV in Fishing Communities Project (1 year)</p> <p>Activity 1.1: Appointment of responsible International TA Project Officer to work on the project (6 months 3 x 2 month visits in first year)</p> <p>Activity 1.2: Preparation of tender documents for HIV in Fishing Communities Project, these to include: Preparation of TORs and subsequent “prudent shopping” among shortlist of suitable companies and organisations to award a contract for production of documents (a) and (b)</p> <p style="padding-left: 40px;">a) A restricted tender covering implementation of the Prevention of HIV in Fishing Communities Project, primarily through peer education activities in the Nile Sobat rivers livelihood zone and in Juba</p> <p style="padding-left: 40px;">b) A tender for routine monitoring and final evaluation of the Prevention of HIV in Fishing Communities Project</p> <p>Activity 1.3: Assessment of tenders and award of contracts.</p> <p>Outputs: 2 tenders, one for implementing and one for routine monitoring and final evaluation</p> <p>Component 2: Implementation of Prevention of HIV in Fishing Communities Project (9 years)</p> <p>Activity 1: Successful tenderer for implementation of the Prevention of HIV in fishing communities project undertakes activities under the agreed tender conditions</p> <p>Activity 2: Successful tenderer for routine monitoring and final evaluation regularly monitors progress and at the completion of the project undertakes final evaluation. Annual review of implementation progress is necessary, against pre agreed milestones; and if necessary the project implementation reassigned in case of non compliance or failure to achieve.</p> <p>Outputs: Activities under the Prevention of HIV in Fishing communities project as agreed in accepted TORs and tender proposal. Routine monitoring and final report on implementation of Prevention of HIV in fishing communities project</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<p>The service providers are:</p> <ul style="list-style-type: none"> • An NGO specialising in HIV and AIDS in Africa • A consulting company tasked with routine monitoring and reporting on the progress of the NGO, and a final monitoring report.
(2) Description of beneficiaries within the framework of the project:	<p>Ultimately the beneficiaries are the people in Nile Sobat rivers livelihood zone and Juba whose HIV rates will be lower than if the project did not happen; leading to better quality of life.</p>

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<p>HIV and AIDS has a devastating effect on fisheries at all levels. In industry trained staff are lost or become less productive increasing costs throughout the processing, distribution and cool chains. In the fishery itself the social cohesion of closely knit communities breaks down, incomes reduce, funds are diverted to mitigation measures, skills are lost, and the community based management of fisheries collapses since individuals begin to take a much shorter view of life and so tend to catch for today rather than conserve for tomorrow. The project will reduce these negative effects of the HIV and AIDS epidemic in South Sudan, and particularly in the high risk fishing communities of the Nile Sobat rivers livelihood zone.</p>
(2) EIRR and/or FIRR, and/or other economic analysis:	<p>(if applicable)</p>

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1" style="width: 100%;"> <tr> <td style="width: 30%; padding: 5px;"> Negative: a Positive: d </td> <td style="padding: 5px;"> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: a Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: a Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • The project will have a negligible environmental impact. <p>(Positive)</p> <ul style="list-style-type: none"> • The project will have a very high social impact in that the higher HIV and AIDS rates that are usually contemporaneous with the commercialising of a capture fishery are avoided in South Sudan. This has many benefits in fishing communities since family resources are not re-allocated to HIV treatment and mitigation, and are instead retained for school fees, savings, investment and food. • Everything in society is immeasurably better without a high HIV infection rate and a high incidence of AIDS. 		

2.6 Monitoring and evaluation for impact measurement

Items	Information
(1) Measurable indicators and situation at a starting point:	<p>The HIV and AIDS rate in South Sudan is unknown with accuracy but are estimated at about 3%. The rates of infection (2009) are highest in the South and lower further North. Areas bordering Uganda have a higher prevalence than interior regions (up to 7%).</p> <p>UNAIDS asserts that, '...an overall adult prevalence above 1% constitutes an epidemic that has spread beyond high-risk groups into the general population'. Therefore, Southern Sudan has a generalised epidemic.</p> <p>The measurable indicator is the HIV prevalence in the population in the Nile Sobat rivers livelihood zone</p>
(2) Measurable indicators and situation at the end point:	<p>In some fishing villages in Uganda and Kenya in the first decade of the new millennium, the HIV and AIDS rate reached between 50 and 70% amongst fishermen. On fishing islands in Uganda the rate of infection is still more than 20%. This leads to morbidity and significant mortality amongst the fishermen.</p> <p>The situation that would be hoped for in South Sudan in the Nile Sobat rivers livelihood zone after the project is that the HIV and AIDS rate would be less than, and definitely not exceed that found amongst the non fishing populations in the same zone at that time.</p> <p>The measurable indicator is the HIV prevalence in the population in the Nile Sobat rivers livelihood zone. Note that most peer education projects do not measure absolute rates of HIV incidence during evaluation, but here it is specifically required, as well as other indicators such as reduction in Sexually Transmitted Infections, reduction in risk taking behaviour and measurement of knowledge of HIV and AIDS.</p>
(3) Methods of measurement and sources of information:	<p>The project will ultimately be assessed on HIV and AIDS prevalence. HIV is identified in a patient by a simple blood test. Normally this test is done on prenatal mothers so that if necessary appropriate treatment can be instigate to prevent mother to child transmission. This data is available from pre-natal clinics and hospitals. The project will avail itself of this data.</p> <p>During implementation progress will be assessed by the numbers of peer educators trained by the project who remain part of the programme, and the geographic location of these peer educators, as well as the other common parameters, such as reduction in STIs, reduction in risk taking behaviour and measurement of knowledge of HIV and AIDS. This information will be available from progress reports by the sub-contractor and verified by the company doing the monitoring and evaluation.</p>
(4) Responsible parties for the monitoring and evaluation:	<p>This is subcontracted to an appropriate consulting company, though the implementing agency will be expected to produce quarterly reports on progress.</p>

2.7 Required human resources

(1) Principle of human resources management:	Sub contracting
(2) Required human resources in the public sector (Positions, grades and numbers):	None.
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	To be decided by contractors. At least 220 peer educators will be trained and retained by the project.

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	M L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	<p>The risks of implementing the project are not great, though it will not be easy in that many of the communities are remote and somewhat inaccessible. Correct choice of NGO/Company to implement the project is a prerequisite to success.</p> <p>The risks to the project outcomes include:</p> <ul style="list-style-type: none"> • Civil disturbance and security • Traditional resistance and taboos related to adoption of HIV prevention measures • Resistance to HIV prevention measures from churches or other organisations • Inadequacy of availability of materials (non project) • Inadequacy of National HIV and AIDS response (non project) • Insufficient Voluntary Testing and Counselling in the national programmes (VTC) <p>There are no significant environmental concerns regarding the project activities. The project is gender neutral, though through education will benefit many women who traditionally are unable to make choices for themselves.</p>

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	None
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Items	Information
<p>2.10 Routine operation and required resources after the completion of the project</p> <p>(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.</p>	<p>By the time the project ends the National Aids Council and the Health Ministry, with support from donors, should have implemented comprehensive projects and programmes addressing HIV and AIDS throughout the country that will make the necessity of addressing Fisheries as a special case unnecessary.</p> <p>Note that this has not happened in Uganda, where fishermen and women in fishing communities still have very high rates of HIV/AIDS, despite the incidence in the general population declining from previous highs. Part of the reason is that fishing communities continue to be in remote areas where access to health care and advice is very limited.</p> <p>If this is repeated in South Sudan then a follow on project may be required.</p>

5.4.4 Fisheries information and fisheries resource management systems development project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Fisheries		
(2) Project name:	Fisheries information and fisheries resource management systems development project		
(3) Project ID:	04.04 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2015/16	Ending FY: 2021/22	Duration (years): 7
(5) Total investment:	SSP 56,361,000	USD 14,090,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FI.SA5	Fisheries management and productivity enhancement	Table 2-3
(2) Government organisation:	06	MAT-FA	Directorate of Fisheries and Aquaculture Development	Table 2-6
	08	MAR-EX	Directorate of Livestock and Fisheries Extension	Table 2-6
(3) Activity types:	201	SP-IM	Service delivery and infrastructure development - Information management and analysis	Table 2-12
	203	SP-EX	Service delivery and infrastructure development - Extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	X
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	X
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/15-2020/21, 5 years)	X
	02	PH2	Phase II (2020/21-2025/26, 5 years)	
	03	PH3	Phase III (2025/26-2030/31, 5 years)	
	04	PH4	Phase IV (2030/31-2040/41, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	
	03	HAM	Hills and Mountains	
	04	ISP	Ironstone Plateau	
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
52	NGL	NGO loans and equity financing		

Items	Information
61	FGI Financed by generated income

Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

South Sudan has a large freshwater fishery based on the Nile Sobat Rivers Livelihood Zone, which encompasses the Sudd, a large swamp and also a 5,700,000 ha RAMSAR site. The fishery is not well enumerated. There is no reliable data on how much fish is caught, what species make up the catch, the biology of the fish that make up the catch, or the processing and destination of the catch. What figures that exist are catch figures derived from limited surveys, fish consumption figures, estimations of production potential based on other African lakes and rivers, wild guesses and pure hyperbole.

CAMP has calculated that the consumption of fish in South Sudan is about 17kg per person per year. To supply this consumption level the catch must be in the order of 140,000 tonnes. More than 1.7 million people depend directly on fisheries for livelihood, food security or family income, and many more for nutrition through consumption of purchased fish products.

It is impossible at this time to accurately predict the Maximum Sustainable Yield that might be possible from the capture fisheries, but it probably exceeds 200,000 tonnes per annum, worth at current Juba market prices at least USD800 million.

This project will put in place:

- A Fisheries Information System that will provide information on catches and
- A system to manage the capture fisheries of the country so as to avoid overfishing and subsequent social and economic problems.

The problems that this project is trying to overcome are:

- Problem 1: The present catch and location of the catch from the wild fisheries of South Sudan is unknown because there is no data collection system
- Problem 2: The potential catch, the Maximum Sustainable Yield, from the capture fisheries of South Sudan is unknown.
- Problem 3: The biology of many species in the catch in South Sudan is unknown. The fishery is a multispecies one, with more than 35 species regularly appearing in the markets. The vulnerability of these species to fishing pressure is unknown and the subtle interactions and reactions to fishing pressure for the whole fisheries species assemblage is a complete mystery.
- Problem 4: There is no management of the fish stocks. Some customary constraints exist but they are not based on scientific principles
- Problem 5: There are no trained staff in the MLFI, nor in the states' administrations, capable of setting up a sensible management system for the fisheries of the country
- Problem 6: Undertrained officials throughout the administration have no comprehension of basic natural resource economics, nor understanding of the precautionary approach and ecosystems approach to fisheries management.
- Problem 7: The wild fishery in South Sudan is an open access one, with no controls on numbers of fishers or entry. Open entry is an undesirable management regime, and always leads eventually to overfishing and the collapse of fish stocks.
- Problem 8: Overfishing of resources, which is already reported in some areas of the Sudd, and near towns such as Terekeka, Bor, Malakal, Nassir and Akobo.
- Problem 9: There is no information on the numbers of fishermen, canoes and boats, fish processors and fish trader, nor their distribution in the fishing grounds.
- Problem 10: Some destructive fishing gears are used in the country and their effects are not known
- Problem 11: The body politic is accustomed to wild exaggeration as to the potential of fisheries. The "huge potential" is assumed, millions of fish are "dying of old age", and there are reports of "wasted opportunities" and "massive missed export potential". This makes sensible controls on fishing effort, co-management initiatives, and the application of the "precautionary principle" and "ecosystems approach" difficult to introduce. Science backed by hard facts is needed to dispel misconceptions about the potential of capture fisheries in South Sudan.

The lack of laws and regulations in fisheries in South Sudan is being addressed by a different project, which should be started at about the same time as this project.

(2) Objectives:

The objective of the project is to ensure the long term sustainability of the capture fisheries in South Sudan.

(3) Overall description including temporal and spatial extent of project:

The project will be a National-State project, with data collation and analysis and project management based in Juba at MLFI and all other activities based and implemented in the 10 states.

Items	Information
	<p>The project will include:</p> <ul style="list-style-type: none"> • technical assistance, • a human resources development programme to build capacity at national, state and community level to manage fisheries, • provision of equipment particularly to monitor fish catches and stocks, • development of a Monitoring Control and Surveillance (MCS) capability, • a new data building at MFLI Gudele, • the formation of an organisation to guide fisheries management in the future and • the facilitation of studies and meetings. <p>The project will have 4 components, 3 of which will overlap.</p> <p>Component 1, 6 months, is the pre-implementation component which covers necessary administration, recruitment and design.</p> <p>Component 2, 6 ½ years, starting after component 1 is finished, covering data and the establishment of a Fisheries Information System (FIS) will start with the establishment of a simple fisheries data collection system, based initially on market monitoring in Juba and Malakal. Once the system is developed, and any problems ironed out, this monitoring will be extended to all other states, concentrating on markets in the states' capitals. This data collection system will collect information on catches by weight and species, length and weight statistics for the various species in the catch, and sex and maturity information. Enumerators countrywide will be trained and incentivised, and the data will be computerised and analysed in Juba at MLFI, where eventually a FIS data centre will be built.</p> <p>The data collection and information system will evolve to include biological data on the species considered to be most under threat from overfishing. This will provide scientific advice to fisheries managers in South Sudan regarding specific actions to be taken so as to avoid overfishing (mesh sizes, seasons, size limits, closed areas, protected zones etc). The regulations on fisheries in South Sudan can then be amended appropriately.</p> <p>The routine data collection systems set up will be further developed in the Nile Sobat area where it will include information on numbers and types of fishers, spatial information on fishers and catches, and other important data such as Catch Per Unit Effort by species for various gears, seasonality of the catch and eventually spatial biological data on important species, such as spawning grounds, migrations etc. A simple GIS will aggregate all the data collected into a usable tool for managers and researchers.</p> <p>The project will work closely with local administrations, chiefs, elders and community groups to ensure the smooth running of the data collection service.</p> <p>Counterparts in the states and MLFI will require training. Most of this will be provided in-country, though some staff will benefit from overseas attachments. Padak FTC is an ideal venue for this type of in-service training.</p> <p>A FIS building will be constructed, probably at MLFI Gudele, though Bor and Malakal may also be considered, with data rooms and an office.</p> <p>Component 2 will continue throughout the project period. The data collection programme will continue after the project ends, becoming a routine activity for the states and national fisheries departments.</p> <p>Component 3, 6 years, introducing co-management will begin shortly after Component 2 and will cover the implementation of fisheries co-management, involving all stakeholders. Emphasis will be on various participatory techniques to involve fishing communities in co-management so as to protect the fishing stocks from over-exploitation. The data collected by the activities in Component 2 will guide the conservation and management activities of Component 3. The legislative framework for co-management will have been established during the rewriting of the Fisheries Law (separate project).</p> <p>Component 4, 5 years, will start 2 years after project start and will establish a Monitoring Control and Surveillance (MCS) capability in the states' administrations, particularly in the Nile Sobat Rivers Livelihood Zone. Data on numbers of fishers, gears and vessels will be integral to the MCS system, as will a canoe and fishing vessel identification licensing system. Ideally the MCS system will be managed by the fishing communities themselves, requiring the project to provide support in the form of training, communication, some funding and materials only.</p>
(4) Component structure:	<p>Component 1: Pre Implementation. 6 months Component 2: Data collection activities. 6 ½ years, starting after component 1 is finished</p>

Items	Information
	<p>Component 3: Fisheries Management systems. 6 years. Concurrent with component 2, but starting 6 months later.</p> <p>Component 4: Monitoring, Control and Surveillance. 5 years Concurrent with component 2, but starting one year later</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Pre Implementation</p> <p>Activity 1.1: Preparation of tender documents and recruitment of suitably qualified Consulting Company to implement the project activities (not a costed activity, to be done by DP)</p> <p>Activity 1.2: Identification of states' focal points in all 10 states of South Sudan (DoFAD). Each Focal Point provided with a motorbike</p> <p>Activity 1.3: Appointment of coordination officer within MLFI to work with the project, provided with a vehicle</p> <p>Activity 1.4: Arrival of team leader</p> <p>Activity 1.5: Establishment of project office at MLFI. Establishment of MLFI Fisheries Statistics unit using existing staff , initially in existing buildings</p> <p>Activity 1.6: Vehicles and motorbikes acquired.</p> <p>Outputs: An appropriate consulting company is engaged to undertake the project. The processes and staff necessary to manage the project in MLFI is established.</p> <p>Component 2: Data collection activities</p> <p>Activity 2.1: Arrival of Technical Assistance for Component 2. Each provided with a vehicle.</p> <p>Activity 2.2: Training of states' focal points and enumerators</p> <p>Activity 2.3: Establishment of market monitoring in Juba and Malakal</p> <p>Activity 2.4: Tenders and construction of 2 storey FIS building at MLFI Gudele site (with sufficient space to act as a management and MCS control centre).</p> <p>Activity 2.5: Enlargement of data collection activities as time and logistics allows, to include biological data and research, possibly using facilities at Padak FTC.</p> <p>Activity 2.6: MFLI to commission studies which may include fish genetics, lacustrine and riparian ecology, fish tagging, limnology, and socio economics as required.</p> <p>Activity 2.7: Local training and regional attachments for states and national staff as appropriate. A limited number of scholarships for academic studies may be appropriate.</p> <p>Activity 2.8: Comprehensive but simple GIS system developed and a repository for an electronic library on fisheries established.</p> <p>Activity 2.9: Advice produced in usable form for fisheries management and MCS activities including contributions towards co-management measures, potential yields from the fishery, biological measures for management of specific species and stocks, and other relevant conclusions.</p> <p>Activity 2.10: Production and distribution of newsletters, reports and press releases on fisheries in South Sudan in a timely manner locally and regionally</p> <p>Activity 2.11: Purchase of vehicles, motorbikes for enumerators, boats and outboards, and safety equipment for outboards</p> <p>Activity 2.12: Purchase of special equipment, GPS, waterproof cameras, water testing kits, wellington boots and raincoats for enumerators, modems, rugged telephones, fish measuring boards, digital scales, tents and camping gear, etc.</p> <p>Outputs: Capacity of states staff, enumerators and national staff is enhanced. Regular data bulletins are produced. Targeted studies undertaken on capture fisheries in South Sudan undertaken. Functional and comprehensible GIS system established. Data provided to fisheries managers and co-managers in an understandable format for management purposes. Data, reports and newsletters distributed widely both in-country and regionally.</p> <p>Component 3: Fisheries Management systems</p> <p>Activity 3.1: Arrival of Technical Assistance for Component 3</p> <p>Activity 3.2: Detailed plan of action for management systems developed, covering, <i>inter alia</i>, key areas, communities, species, sizes and seasons.</p> <p>Activity 3.3: Local training and regional attachments for states and national staff as appropriate. A limited number of scholarships for academic studies may be appropriate.</p> <p>Activity 3.4: Human Resource Development in the fishing communities in the Nile Sobat region covering all aspects of fisheries, particularly related to co-management principles and resource management. HIV awareness will be included.</p> <p>Activity 3.5: Co-ordination with fishing communities and other relevant stakeholders throughout the Nile/Sobat and Bahr-el-Gazal on co-management of fisheries in these zones. Emphasis on participatory techniques to involve fishing communities in co-management</p> <p>Activity 3.6: With the fishery co-managers, development of Fisheries Management Plans</p>

Items	Information
	<p>(FMPs) for the Sudd, Sobat and tributaries, Eastern and Western Floodplains, and Bahr-el-Ghazal. Development of FMPs for individual species or discrete local areas as required.</p> <p>Activity 3.7: Regulations revised to cover gears, closed areas, fishing reserves, closed seasons, size limits and other management measures for the fishery.</p> <p>Outputs: Co-management is established throughout South Sudan as the predominant management method. Capacity of communities, states' and national staff to manage fisheries is enhanced. Fisheries Management Plans are produced. Regulations are updated.</p> <p>Component 4: Monitoring, Control and Surveillance</p> <p>Activity 4.1: Arrival of Technical Assistance for Component 4</p> <p>Activity 4.2: Planning for MCS with local communities, states' fisheries departments and MLFI</p> <p>Activity 4.3: Establishment of an MCS system that uses the resources of the local fishing communities, but backed up by legislative and executive powers derived from the states' and national governments.</p> <p>Activity 4.4: Training of states officers and community leaders in MCS. Training to be undertaken locally (Juba/Padak FTC)</p> <p>Activity 4.5: Provision of a limited number of vessels and outboard engines to fishing communities taking part in the MCS programme.</p> <p>Activity 4.6: Revision of fisheries regulations so as to give community based MCS efforts the legal underpinning required.</p> <p>Activity 4.7: Development of a South Sudan Fisheries Organisation (SSFO), to represent the fisheries communities of the nation. The organisation possibly to be headquartered at Dolieb Hill in Upper Nile State. This organisation will continue co-management and MCS activities, including the implementation of FMPs after the project finishes.</p> <p>Outputs: An appropriate MCS system for the country is established, based on co-management principles and involving communities and states. Capacity of states' and communities is enhanced. Equipment is provided for MCS as appropriate. Regulations are updated. A South Sudan Fisheries Organisation (SSFO) is established.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<ul style="list-style-type: none"> • Consulting company awarded the contract to implement the project. • Subcontractors and building contractors • Padak FTC for training venues • Equipment suppliers
(2) Description of beneficiaries within the framework of the project:	<ul style="list-style-type: none"> • Fishing communities countrywide • Fish traders, wholesalers, and retailers • Fishers who have their resources protected from overfishing • MLFI, states, fishing communities involved with fisheries who have their capacity enhanced

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<p>The major outcome will be to protect the fisheries of South Sudan from overexploitation. Overfishing of the resources will lead in the future to a loss of catch of approximately 120,000 tonnes of fish, worth at today's fresh fish prices in Juba SSP2.76 billion. It is the protection of this production that the project seeks to achieve. This amount of fish and income is vital to maintain and improve the economic conditions of the rural communities that are the users of the resource. Overfishing will have a devastating effect on these communities, on food security, nutrition and economic progress. It is absolutely vital that overfishing is avoided in the future. See CAMP situation report for estimates of numbers of fishers and population dependant on fisheries.</p>
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td> Negative: a Positive: c </td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: a Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: a Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Positive)</p> <ul style="list-style-type: none"> • The major impact will be that the fisheries resources of the country will not be overfished, guaranteeing the livelihoods of fishermen and processors countrywide. • Fisheries within the Sudd wetland and RAMSAR site will be protected. • Closed areas, fisheries protected areas and other management measures will impact on fish catches and increase fish resources. • Traditional user rights will be protected through co-management of resources. 		

Items	Information
2.6 Monitoring and evaluation for impact measurement	
(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • Data: No data is being collected on fisheries in South Sudan. Studies done have tended to be ad-hoc, haphazard, badly enumerated and the results poorly distributed. Staff are insufficiently trained to do this sort of work. • The measurable indicators are the reports, newsletters and other data outputs of the MLFI (none at present) • Fisheries Management: Some cooperatives and fisheries organisations exist but they are mainly production rather than management orientated. • The measurable indicators currently are crude counts of Fisheries Producer Organisations and Co-operatives, seldom verified, and no measurement of actual performance. • MCS: There is no fisheries MCS in the South Sudan in 2015.
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • Data: At the end of the project there will be a system of data collection established, with appropriate interpretation and a GIS system, reporting regularly in-country and regionally. Trained staff will continue the data collection activities after the project completes. • The measurable indicators are the reports, newsletters and other data outputs of the MLFI. • Fisheries Management: At the end of the project the main fishing grounds will be managed under co-management principles with the communities, states' and national fisheries administrations. The capacity of the communities and states will have been enhanced. • The measurable indicators are the numbers of communities co-managing their fish resources and the numbers of FMPs effected and operating. (note that it is the effectiveness of these management units and FMPs that should be measured, not their crude numbers). • MCS: MCS should ensure that fisheries laws, rules and regulations are enforced throughout the country. • The indicators are the effectiveness of MCS measures in preventing infringement of laws, rules and regulations in community managed fisheries and in enforcing FMPs.
(3) Methods of measurement and sources of information:	<p>Ultimately the project will be measured by the numbers of effective Fisheries Management Organisations (FMOs) and Fisheries Management Plans (FMPs), and the sustainability of the fish catch. This is not a numbers game, it is effectiveness that has to be measured, not merely numbers of groups or organisations set up and FMPs written.</p> <p>Sources of information:</p> <ul style="list-style-type: none"> • Project reports • Catch and effort data from MLFI • Annual, monthly and special reports of MLFI, SMARFs, and FMOs • MLFI news releases • Training reports (Padak etc)
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> • Project TA • MLFI
2.7 Required human resources	
(1) Principle of human resources management:	<p>International TA providing technical and management expertise supporting and mentoring MLFI and states' staff</p>
(2) Required human resources in the public sector (Positions, grades and numbers):	<p>No new fisheries staff in MLFI will be required. Sufficient existing staff are available and vacant posts in the establishment can be filled.</p> <p>In the states' sufficient staff exist to carry out the project activities.</p> <p>The staff involved at MLFI will be:</p> <ul style="list-style-type: none"> • 1 coordination/liaison officer (CAMP/MLFI) • 1 data knowledge leader • 1 data officer • 2 data clerks • 2 fisheries management group leaders (liaison with states and communities) • 1 fisheries MCS liaison leader (liaison with states and communities) <p>In the states:</p> <ul style="list-style-type: none"> • 10 focal points • 10 fisheries co-management officers • 30 enumerators (states) <p>In communities:</p> <ul style="list-style-type: none"> • Staff will be recruited for specific tasks if necessary.
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<ul style="list-style-type: none"> • 1 International TA Team Leader (72 months, 2 x 35 month contracts). Qualification in fisheries and 15 years all round experience in fisheries development, including experience with fresh water bodies in Africa. A track record in project management, project preparation, and monitoring and evaluation in developing countries. A working knowledge of project financial procedures is important.

Items	Information
	<ul style="list-style-type: none"> • 2 thematic fisheries experts. (60 man months, split into 2 contracts each, for each expert). Fisheries Management Specialist, Fisheries Resources Monitoring Specialist, To have appropriate qualifications, at least 8 years experience in their fields and development experience in African fisheries. Practical experience more important than academic qualifications. • 1 Community Development Specialist. 24 MM. Wide experience in engagement with fishing communities. Appropriate other experience in fisheries. African experience an advantage. • 1 MCS Specialist (24 man months). Appropriate experience in fisheries MCS systems. More practical than academic. <p>In addition to the long term experts, short term consultancies of a total of 72 months will be provided for specific studies, planning and training tasks addressing the following areas:</p> <ul style="list-style-type: none"> • Training in specialised subject areas • Stock assessment and resource monitoring • Studies on economics of the fishery • Socio economic studies of fishing communities • Database development and information packaging • Communication and problem solving

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	<table border="1"> <tr> <td>M</td> <td>L: Low</td> <td>M: Medium</td> <td>H: High (select an indicator from the list)</td> </tr> </table>	M	L: Low	M: Medium	H: High (select an indicator from the list)
M	L: Low	M: Medium	H: High (select an indicator from the list)		
(2) Explanation of expected risks:	<ul style="list-style-type: none"> • Lack of take up from the states and national administrations • Failure to interact positively with the fishing communities and obtain cooperation • Security problems, particularly in remote areas • Difficulty of convincing politicians and community leaders of the need for conservation and management measures • Difficulty of reconciling RAMSAR and other international agreements with FMPs and community co-management • Management fatigue, where the co-managers get tired of doing the management of the resources and do not see sufficient benefit. 				

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	<p>South Sudan is obliged by international treaty and the constitution to devolve the management of fisheries to the users. However,</p> <ul style="list-style-type: none"> • the allocation of use-rights in fisheries must take place within a legal framework (the DoFAD must redraft the fisheries law as soon as possible and enact appropriate regulations to control fisheries) • the users of the resources must comply with legally binding obligations. It is a two way process, the government gives long term rights to users, who also have obligations. • the allocation process must be transparent and open to public scrutiny so that it is not open to corruption. • historic rights and economic dependencies on fisheries resources are respected, provided legally binding principles for use and conservation are followed; (Historic rights are recognised in the constitution) • the stakeholders must participate directly in the allocation process through their elected representatives. <p>Currently none of this is being done, and there is no legislative underpinning of the process, so it cannot be done immediately, but it is the future for management of fish resources in South Sudan.</p>
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>The project will setup all the necessary systems and the Government and States will have to maintain them, using recurrent funding.</p>
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Part 3: Project cost estimation

Project duration	Cost group	SSP/USD = 4																													
		Phase 1			Phase 2			Phase 3			Phase 4			Total																	
		15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000	% to total			
1 Management and operation of project		4,861	6,655	9,756	9,911	6,587	6,303	6,190																			50,263	12,566	89%		
1 Deployment of government staff																											23	6	0%		
1 Research works (per diem)																											15	4	0%		
2 Research works (transportation)																											8	2	0%		
2 Procurement of administrative services (contracted)		100	100	400	100	100																					800	200	1%		
1 Newsletter & information sheets production & distribution campaign																											200	50	0%		
2 Printing and publicity																											300	75	1%		
3 Leaflets, publicity etc.																											300	75	1%		
3 Procurement of professional services (contracted)		4,363	5,623	8,647	8,647	5,623	5,623	5,623																				44,150	11,038	78%	
1 International consultant (team leader)		1,296	1,296	1,296	1,296	1,296	1,296	1,296																				9,072	2,268	16%	
2 Local consultant (accountant)		346	346	346	346	346	346	346																				2,419	605	4%	
3 Local consultant (administrator)		346	346	346	346	346	346	346																				2,419	605	4%	
4 International consultant (fisheries resources monitoring)		1,080	1,080	1,080	1,080	1,080	1,080	1,080																				7,560	1,890	13%	
5 International consultant (short term)		1,296	1,296	1,296	1,296	1,296	1,296	1,296																				9,072	2,268	16%	
6 International consultant (community development Specialist)																												3,024	756	5%	
7 International consultant (fisheries management specialist)		1,260	1,260	1,260	1,260	1,260	1,260	1,260																				7,560	1,890	13%	
8 International consultant (MCS specialist)																												3,024	756	5%	
4 Implementation of staff training		236	366	437	297	297	13	13																				1,660	415	3%	
1 Training of focal points (per diem)		14	14																									27	7	0%	
2 Training of focal points (transportation)		15	15																									30	8	0%	
3 Training of enumerators (per diem)		81	81	81																								243	61	0%	
4 Training of enumerators (transportation)		10	10	10																								30	8	0%	
5 Long term training at Padek FTC for states & MFLI (per diem)		12	12	12	12	12	12	12																				72	18	0%	
6 Long term training at Padek FTC for states & MFLI (transportation)		1	1	1	1	1	1	1																				8	2	0%	
7 Local study tour (regional) for states & MFLI (per diem)																												17	4	0%	
8 Local study tour (regional) for states & MFLI (transportation)																												32	8	0%	
9 Long-term international education for states & MFLI (per diem)																												144	36	0%	
10 Long-term international education for states & MFLI (transportation)																												16	4	0%	
11 Tuition fee for long-term education for states and MFLI																												160	40	0%	
12 Long term training at Padek FTC for states & MFLI (per diem)		108																										108	27	0%	
13 Long term training at Padek FTC for states & MFLI (transportation)		8																										8	2	0%	
14 Local study tour (regional) for states & MFLI (per diem)																												25	6	0%	
15 Local study tour (regional) for states & MFLI (transportation)																												48	12	0%	
16 Long-term international education for states & MFLI (per diem)																												144	36	0%	
17 Long-term international education for states & MFLI (transportation)																												16	4	0%	
18 Tuition fee for long-term education for states and MFLI																												160	40	0%	
19 Training for states offices (and community leaders)(per diem)																												360	90	1%	
20 Training for states offices (and community leaders)(transportation)																												12	3	0%	
5 Implementation of research, studies and surveys																															
6 Delivery of extension and training services to the private sector		300	300	300	300	300	300	300																					1,800	450	3%
1 Data collection activities(1)		210	210	210	210	210	210	210																					1,260	315	2%
2 Data collection activities(2)		90	90	90	90	90	90	90																					540	135	1%
7 Operation and maintenance		262	262	262	262	262	262	262																					1,830	457	3%
1 Fuel for vehicle and motorbike		130	130	130	130	130	130	130																					910	228	2%

Project duration	SSP/USD = 4												Total																	
	Cost group																													
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27		27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000	% to total		
2 Utilities for whole project	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	840	210	1%		
3 Maintenance for bile for data collection activities(1)	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	50	13	0%		
4 Maintenance for bile for data collection activities(2)	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	23	6	0%		
5 Uniforms																											6	2	0%	
2 Construction of infrastructure and procurement of equipment	1,151	2,030	890	500	660																						5,221	1,305	9%	
1 Construction of office buildings	1,200	160																									1,360	340	2%	
1 Building at MLFI Gudele for data	1,200																										1,200	300	2%	
2 SSFO building			160																								160	40	0%	
2 Construction of research, training and other specialized buildings																														
3 Construction of feeder roads																														
4 Construction of production, market and transportation facilities																														
5 Acquisition of land																														
6 Procurement of vehicles	1,000	350		500	300																						2,150	538	4%	
1 Vehicle for team leader	200			200																							400	100	1%	
2 Motorbike for focal point	50	50																									100	25	0%	
3 Vehicle for team experts	300				300																						600	150	1%	
4 Motorbikes for enumerators	150	150																									300	75	1%	
5 Vehicle for team experts	300				300																						600	150	1%	
6 Vehicle for MCS specialist	150	150																									300	75	1%	
7 Procurement of equipment	151	480	720		360																						1,711	428	3%	
1 ICT equipment for office	100																										100	25	0%	
2 ICT equipment for office	24																										24	6	0%	
3 ICT equipment for office	13																										13	3	0%	
4 ICT equipment for data collection	15																										15	4	0%	
5 Boats and outboards		360																									360	90	1%	
6 Replacement outboards					120																						120	30	0%	
7 Special equipment for fish data collection		120			120																						240	60	0%	
8 Patrol boats. Basic. Fibreglass with O/B			720																								720	180	1%	
9 Replacement outboards					120																						120	30	0%	
3 Subsidies, equity and loans	52	266	211	211	211	87																					877	219	2%	
1 Provision of cash and/or in-kind subsidies			35	35	35	35																						105	26	0%
1 Start-up costs for SSFO			35	35	35	35																						105	26	0%
2 Provision of training services to the private sector	52	266	176	176	176	52																					772	193	1%	
1 Per diem etc for training of fishers, processors and traders	25	25	25	25	25	25																					150	38	0%	
2 Per diem etc for training of community leaders and chiefs	15	15	15	15	15	15																					90	23	0%	
3 Transportation for training of community leaders and chiefs	3	3	3	3	3	3																					20	5	0%	
4 Per diem etc for discussions with community leaders	8	8	8	8	8	8																					50	12	0%	
5 Per diem for planning for MCS with communities			30																								30	8	0%	
6 Transportation for planning for MCS with communities		60																									60	15	0%	
7 Per diem for training for (states offices and) community leaders	120	120	120	120	120	120																					360	90	1%	
8 Transportation for training for (states offices and) community leaders	4	4	4	4	4	4																					12	3	0%	
3 Equity investments																														
4 Provision of loans																														
5 Social assistance/donation (Emergency)																														

SSP/USD = 4

Project duration	Phase 1												Phase 2				Phase 3				Phase 4				Total				
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000	USD '000		
Total (SSP '000)	6,064	8,737	10,302	10,621	7,457	6,389	6,190																				56,361	14,090	
Total (USD '000)	1,516	2,184	2,726	2,655	1,864	1,597	1,548																					14,090	
% to total	11%	16%	19%	19%	13%	11%	11%																				100%	100%	

Public sector project
Routine work by government

Private sector project
Routine work by private sector

5.4.5 Private sector promotion of small scale aquaculture investment

Items	Information
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Part 1: Project profile administration**1.1 Project identification**

(1) Subsector:	Fisheries		
(2) Project name:	Private sector promotion of small scale aquaculture investment		
(3) Project ID:	04.05 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2020/21	Ending FY: 2039/40	Duration (years): 20
(5) Total investment:	SSP 3,000,000	USD 750,000	Note: Not including recurrent cost
(6) Private sector co-finance	SSP 60,000,000	USD 15,000,000	

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FI.SA4	Private sector projects and businesses	Table 2-3
(2) Government organisation:	06	MAR-FA	Directorate of Fisheries and Aquaculture Development	Table 2-6
(3) Activity types:	301	PS-PR	301 PS-PR Private sector - Production	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	
	72	JG	Jonglei State	
	73	UT	Unity State	
	81	WA	Warrap State	
	82	NB	Northern Bahr el Ghazal State	
	83	WB	Western Bahr el Ghazal State	
	84	LK	Lakes State	
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	X
(5) Planning time horizon (start):	01	PH1	Phase I (2015/15-2020/21, 5 years)	
	02	PH2	Phase II (2020/21-2025/26, 5 years)	X
	03	PH3	Phase III (2025/26-2030/31, 5 years)	
	04	PH4	Phase IV (2030/31-2040/41, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	
	04	ISP	Ironstone Plateau	
	05	NSR	Nile-Sobat Rivers	
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	X
(8) Funding sources:	11	NBF	National government budget/development fund	
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	X
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

Aquaculture is a subsector that has huge potential, in that the Greenbelt Livelihood Zone in SW South Sudan has year round water supplies, suitable terrain (many suitable soil areas and gravity fed water supplies) and an almost ideal climate for tropical aquaculture. Additionally the two main species to be cultured (*Clarius gariepinus* – the African cat fish and *Oreochromis niloticus* -the Nile tilapia) are both technologically suitable and native species to South Sudan.

Aquaculture has not taken off for a variety of reasons, notably instability in the area most suitable for farming fish, but also because there is no training and research institution to initiate and co-ordinate aquaculture development. (A National Aquaculture Centre is to be established under a separate CAMP project). What few efforts in aquaculture have been made by Donors and various NGOs and have had very little impact.

Presently aquaculture is concentrated in CES and WES, near Yei and Yambio. These are village level subsistence enterprises usually run by groups or associations. Although on paper there are a significant number of ponds, problems still beset the farmers, such as supply of fry, lack of nets for harvest, and feed problems. Basic husbandry techniques are not fully understood and the DPs and NGOs involved have been remiss in not providing continual support in some areas. As a result production is less than 2 tonnes per year from more than 80 ponds, of which only 40 are producing fish.

Elsewhere in Africa fish subsistence farming families have achieved a range of benefits including:

- increased farm productivity,
- increased household incomes,
- improved adaptation and resilience to erratic climatic conditions,
- improved food and nutritional security, through increased production and consumption of fresh fish and food crops grown around the fishponds.

In some countries small scale aquaculture has been used to mitigate the effects of HIV and AIDS in farming communities by providing extra protein to the families affected.

It is however pertinent to point out that the subsistence type of aquaculture development has failed to have the impact expected in African countries, and on re-examination of progress FAO has concluded¹⁶⁴ that the approach is not correct, and the emphasis has to move away from subsistence towards “entrepreneurship”, with larger farms, based in clusters round towns which provide supplies and markets for outputs.

In general aquaculture is gender neutral in that both men and women participate, both as owners of the land and enterprises, and as workers on the farms. Up to now in South Sudan the majority of the subsistence ponds set up have been owned by individuals or groups, with a high proportion of women involved. Since aquaculture is a new kind of activity for South Sudan there are no preconceived notions about gender related issues surrounding the activity.

Aquaculture development in South Sudan will take three paths:

- Subsistence, village level small scale low input fish farming. Integrated with agriculture using inputs from agriculture wastes and providing water for livestock in times of drought. Low yields and low level husbandry techniques.
- Small scale commercial, clustered around towns. Semi intensive with considerable inputs of feed and fertilisers. Relatively high yields. Requires good husbandry skills. Fish sold to local markets.
- (Not a target of this project) Large scale commercial, with very high inputs and yields, very intensive methods and where close and constant management of the pond operation is essential, the fish are completely reliant on artificial feeds and maintenance of water quality and the business is usually undertaken by large corporations. Large scale commercial aquaculture requires significant investment in equipment and systems, as well as treatment of wastewater. This form of aquaculture can be very risky indeed since the high intensity of production leads to all sorts of difficulties with disease and water quality problems if management is not good.

This project is concentrating on subsistence and small scale commercial aquaculture, where the production units will be owned by South Sudanese, and located on their own land.

¹⁶⁴ Moehl, J et al. 2006. *Guiding Principles for promoting Aquaculture in Africa: benchmarks for sustainable development*. Food and Agriculture Organization of the United Nations, Regional Office for Africa, Accra, Ghana, 2006

Items	Information
	<p>Finance is vital for aquaculture. Aquaculture farmers need capital to meet farm set up costs and equipment. Loans may be needed to purchase or rent land, machinery and equipment including boats, vehicles and aerators, to build ponds as well as storage facilities, and for vertically integrated farms, hatcheries, feed mills and processing plants. These costs, which are independent of the level of production and the degree of use of productive resources, can be important in the short run.</p> <p>Financing of some sort is also necessary for farmers to meet variable costs. Money to cover expenses related to the purchase of items such as seed, feed, fertilizers, chemicals and fuel, or to pay labour, especially in the fish production cycle, is not always at hand. Though they can be increased or decreased at the farm manager's discretion, these variable costs can nevertheless be an important part of farm expenses.</p> <p>This project describes the level of finance needed for both subsistence level fish farmers and small scale "entrepreneurial" commercial farmers in the Green Belt. Subsistence farms have a role to play in food security and nutrition. "Entrepreneurial" small scale fish farmers will have a significant impact on fish supplied to the wider community in the towns, as well as supporting subsistence farmers through their small scale hatcheries, equipment loan and supply and advice.</p> <p>Finance would be for short-term, medium-term and long term purposes.</p> <p>Incentives for investment in the aquaculture industry in South Sudan would also be expected. These would take the form of tax incentives, reductions in tax for essential inputs, and access to capital funding for equipment, inventory and buildings.</p> <p>(Although there may be opportunities in livelihood zones other than the Greenbelt Livelihood Zone, particularly for cage culture in the Nile/Sobat, or in some lakes, and for aquaculture in irrigation schemes, dams and settlement ponds, these are not covered in this project, since the irrigation schemes, dams and hydropower projects will not be in place for many years.)</p>
(2) Objectives:	<p>The project is expected to last for 20 years, though there is in fact no end point to financing aquaculture.</p> <p>The financial institution making the loans is yet to be determined. It may be the Agricultural Bank, a local commercial bank, or another financial institution. There may be a need for an injection of capital from a donor agency, or funds could come from the financial institution itself. It is unlikely that direct external investment will be a source of funds, as this scale of aquaculture is locally based, and reliant on the ownership of the land being with the farmer. Funds may however come from overseas through family connections.</p> <p>Financing will be to fish farmers in both Yambio and Yei (and hopefully in Maridi, Mundri, and Amadi). Note that location of the financial institution is now less important as much banking can be done by mobile phone.</p> <p>The Greenbelt Livelihood Zone is where small scale aquaculture will be concentrated, round the major towns of Yei, Yambio, Maridi, Mundri, and Amadi. Smaller towns around which aquaculture clusters should also develop will soon be covered by mobile banking. The level of access to mobile phones in South Sudan is likely to increase from its present level¹⁶⁵. The imminent introduction of mobile banking through mobile phones will alter the dynamics of all kinds of banking and finance in rural areas.</p>
(3) Overall description including temporal and spatial extent of project:	<p>The project describes the scale of extra investment, beyond that for land, that will be required by the private sector to invest in small scale aquaculture in the Greenbelt Livelihood Zone during the period of the CAMP project (until 2040).</p> <p>It is assumed that incentives for investment in the aquaculture industry in South Sudan would also be available. These would be in the form of tax breaks for imports of essential equipment, relaxation of taxes on profits and allowances against taxes for capital investments.</p>
(4) Component structure:	<p>Component 1: Disbursement of loans</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1: Disbursement of loans (10 years) Activity 1.1: Financial institution sets up:</p>
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¹⁶⁵ of 38% in rural and peri-urban households, CAMP Financial Institution fisheries sub-sector Situation Analysis 2013

Items	Information
	<p>the use of innovative means, such as biometrics, to identify clients; alternatives to traditional financial analysis, cash flows rather than balance sheets; alternatives to traditional forms of collateral, such as involving NGOs a guarantors in "tripartite" arrangements and group lending; developing expertise in aquaculture at the level of the credit officers and senior management levels. mobile payment systems using the phone network.</p> <p>Activity 1.2: Bank disburses loans over the 25 year period of the project activities, following basic guidelines agreed during selection process.</p> <p>Activity 1.3: Bank audits and monitors the performance of the loan fund using in-house systems.</p> <p>Outputs: US\$15,000,000 of finance</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	Financial institution administering the loans Ministry of Finance (banking oversight) and tax incentives for aquaculture Ministry of Finance (underwriting the loan scheme).
(2) Description of beneficiaries within the framework of the project:	Subsistence and small scale commercial fish farmers in the Greenbelt Livelihood Zone.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	Fish production from subsistence and small aquaculture rises to 10,000 tonnes per year.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: b</td> <td rowspan="2">Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society</td> </tr> <tr> <td>Positive: c</td> </tr> </table>	Negative: b	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society	Positive: c
Negative: b	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society			
Positive: c				
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • There will be almost no direct environmental or social impact directly from the project activities • In the future project activities may contribute to some problems by funding the expansion of fish farms in the green belt. These may be a) discharge of pond effluent into watercourses (not usually much of a problem with small scale fish farming), b) some health problems in fish farm workers (bilharzia, buruli ulcer, etc.) and c) use of agricultural land for aquaculture. <p>(Positive)</p> <ul style="list-style-type: none"> • Positive effects of small scale aquaculture include the production of fish for nutrition, food security and economic growth; resilience to external shocks provided by the pond itself, cash crops grown near fishponds, income, employment and the growth of service industries. 			

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	Indicator: Amount of credit disbursed in the Greenbelt Livelihood Zone to subsistence and small scale commercial fish farmers Amount of fish produced Starting point: 2 tonnes
(2) Measurable indicators and situation at the end point:	Indicator: Amount of credit disbursed in the Greenbelt Livelihood Zone to subsistence and small scale commercial fish farmers Amount of fish produced (note that disbursing loans is not an indicator of success, unless it leads to an increase in fish production) End point: \$15,000,000 disbursed Possibly 10,000 tonnes of fish produced in the Greenbelt Livelihood Zone by 2040
(3) Methods of measurement and sources of information:	Absolute value of loans disbursed. Absolute numbers of successful and performing loans From lenders reports and annual monitoring and audit reports Financial Institution audit and monitoring report. MLFI reports - fish production Export statistics - fish production
(4) Responsible parties for the monitoring and evaluation:	Financial Institution running the scheme Ministry of Finance MLFI - fish production

2.7 Required human resources

(1) Principle of human resources management:	Private sector
(2) Required human resources in	None

Items	Information
the public sector (Positions, grades and numbers):	
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	All is assessed by the financial institution on the basis of need.

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	M	L: Low	M: Medium	H: High	(select an indicator from the list)
(2) Explanation of expected risks:	<ul style="list-style-type: none"> • These subsistence and small scale commercial fish farms will be set up in settled societies, not subject to internal security threats. • Although fisheries and aquaculture is considered to be a risky loan target, aquaculture is not the same as capture fisheries, in that the recipients are settled, have assets and are established communities. They are using their own land on which to grow fish. Risk of defaults is thus much lower than in other fisheries related businesses. • There are few lenders in South Sudan, so the choice of financial institution to disburse the loans is very limited. • The financial services industry in South Sudan is in its infancy, and there may be problems with oversight and institutional control. • Financial institutions in South Sudan are generally less likely to lend to women than to men, because women tend not to be owners of the collateral in a family group. 				

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	<p>The scheme will enable fish farmers access to equipment and materials that they were not able to obtain prior to the project.</p> <p>This includes:</p> <ul style="list-style-type: none"> • Hire of bulldozers and other heavy equipment to dig ponds • labour if necessary for construction • Materials for the construction of monks and overflows etc • Pipework • Fertilisers for pond enrichment • Feeds for fish, particularly during start up period (first 8-12 months when there is no fish to sell because they have not yet grown to marketable size, but they still need feeding). • Fish health medicines • Insulated boxes for marketing • Seine nets for harvesting ponds • Equipment for low tech small scale hatcheries • Labour for pond construction and harvesting • Fish farm buildings, lock ups, feed stores and silos, watchmen huts • Holding tanks • vehicles <p>Each small scale commercial fish farmer will need approximately SSP500,000 to set up. A proportion of this will be expected to come from investor funds, but much will be borrowed from banks or Financial institutions.</p> <p>Tax and other incentives that apply to aquaculture will also assist investment in the sector.</p> <p>A subsistence farmer or aquaculture group will require less than SSP 40,000.</p>
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	None
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5.4.6 Small scale aquaculture development and promotion project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Fisheries and Aquaculture		
(2) Project name:	Small scale aquaculture development and promotion project		
(3) Project ID:	04.07 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2022/23	Ending FY: 2028/29	Duration (years): 7
(5) Total investment:	SSP 36,396,000	USD 9,099,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FI.SA6	Aquaculture production and productivity enhancement	Table 2-3
(2) Government organisation:	02	MAR-SC	Directorate for States and Special Projects Coordination.	Table 2-6
	06	MAR-FA	Directorate for Fisheries and Aquaculture Development	Table 2-6
(3) Activity types:	04	FI.SA6	Aquaculture production and productivity enhancement	Table 2-12
	203	SP-EX	Service delivery extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	X
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	
	72	JG	Jonglei State	
	73	UT	Unity State	
	81	WA	Warrap State	
	82	NB	Northern Bahr el Ghazal State	
	83	WB	Western Bahr el Ghazal State	
	84	LK	Lakes State	
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/15-2020/21, 5 years)	
	02	PH2	Phase II (2020/21-2025/26, 5 years)	X
	03	PH3	Phase III (2025/26-2030/31, 5 years)	
	04	PH4	Phase IV (2030/31-2040/41, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	
	02	GBT	Greenbelt livelihood zone	X
	03	HAM	Hills and Mountains	
	04	ISP	Ironstone Plateau	
	05	NSR	Nile-Sobat Rivers	
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	X
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income		

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>The “Greenbelt livelihood zone”, consisting of much of Western and Central Equatoria is ideal for fish farming. It has year round water supplies, suitable terrain (many clay soil areas and gravity fed water supplies) and an almost ideal climate for aquaculture. Additionally the main species to be cultured (<i>Clarius garipinus</i>, the African catfish and <i>Oreochromis niloticus</i>, the Nile tilapia) are both technologically suitable and native species to South Sudan. Further north, in the great floodplains and flatlands conditions are not so suitable.</p> <p>Small scale fish farming in ponds can be divided into two fundamentally different activities.</p> <ul style="list-style-type: none"> • Subsistence farming: which is very small scale, low input where the ponds are owned by a family grouping or farmer household, sometimes a small co-operative or group. These ponds tend to be small scale, just a few hundred sq m, have low inputs mainly of organic fertiliser and minimal feeding regimes, and resultantly relatively low production, consumed mainly by the owners with some sales for cash. In parts of Africa these subsistence ponds have been encouraged as a small scale protein source for households or people living with HIV who require extra protein in the diet. It is however pertinent to point out that this type of aquaculture development has failed to have the impact expected in African countries, and on re-examination of progress, FAO has concluded the emphasis should move away from subsistence and move towards “entrepreneurship”, with larger farms, based in clusters round towns which provide supplies and markets for outputs. Subsistence fish farming does, however, still have a valuable role to play in mixed farming systems for small farmers. • Small scale commercial farming: which is a commercial business for profit. The farms are larger, several hectares, with considerable inputs of feed and both organic and inorganic fertiliser, much higher stocking densities are used, usually of genetically improved varieties of fish, and subsequently have much faster growth rates and production per hectare. The product is sold for cash. Farm management has to be much better than in subsistence ponds. <p>Both forms of small scale fish farming will improve food security, provide nutrition and contribute to economic growth and social well being.</p> <p>This project seeks to provide training, advice and access to materials for both subsistence and small scale commercial fish farming in the Greenbelt livelihood zone.</p> <p>(Large scale commercial fish farming is an activity undertaken by the private sector with the sole intention of making money from Aquaculture, using high intensity methods, large amounts of inputs and strict management regimes to control water quality, stocking, feed and predation. This type of fish farming is not a target of this project).</p> <p>In the future there may be opportunities for fish farming in irrigation schemes, either fish/rice culture, cage culture in dams, or wide scale ranching in irrigation channels and canals. Hydropower dams also may present further opportunities.</p>
(2) Objectives:	<p>The objective of the project is to develop rapidly subsistence and small scale commercial fish farming in the Greenbelt livelihood zone through a programme of demonstration, technical advice and training, also establishing two simple tilapia fish hatcheries using "hapas" (nets in ponds).</p>
(3) Overall description including temporal and spatial extent of project:	<p>The project seeks to build on the embryonic fish farming industry already established near Yei and Yambio in the Greenbelt livelihood zone to encourage fish farming through:</p> <ul style="list-style-type: none"> • improving the skills of fish farmers through training and demonstration, • enhancing the capacity of the extension service of WES and CES, • making available through the private sector necessary materials, inputs and information, • assisting in establishing hatcheries at larger private sector farms. <p>The facilities of the National Aquaculture Training and Research Centre (NATRC) will be used wherever possible (The National Aquaculture Centre is yet to be established, but is the subject of a separate development project)</p> <p>The project will only operate in the Green Belt. Prospective fish farmers from other areas will benefit from the experience gained by the NATRC. Cage culture is not considered appropriate at this time for small scale commercial fish farmers, though it may become so later on. Cage culture will probably be developed by large scale commercial enterprises using technology and methods imported from Egypt.</p> <p>Demonstration sites will be established at Yei and Yambio. A core group of farmers will be selected and mentored through each stage of development and management. The farmers will provide their own land for demonstration ponds. The sites of these farms will</p>

Items	Information
(4) Component structure	<p>then be used for training purposes. As part of the agreement of support with the project the farmers will allow (for a small fee) their facilities to be used for training and will take on new farmers on short attachments to enable them to pass on their skills.</p> <p>The fish farmed will be Nile tilapia (<i>Oreochromis niloticus</i>) and the African catfish (<i>Clarias graipinus</i>). It may be possible, in time, to introduce "Nok" <i>Heterotus niloticus</i> and a local carp <i>Labeo niloticus</i>, indigenous species to South Sudan, to develop advanced polyculture systems. Genetically improved strains of <i>Oreochromis niloticus</i> from Egypt may also be appropriate for culture in the Greenbelt livelihood zone.</p> <p>The project will take 7 years. The intention is to set in motion small scale aquaculture in the Greenbelt livelihood zone, which will then continue to expand supported by the National Aquaculture Centre, NGOs and the private sector.</p> <p>A credit scheme, separate from this project, for Agriculture, Fisheries and Aquaculture will run concurrently with the project and extend afterwards, to assist with the establishment of fish ponds.</p> <p>The project will use paid labour, sweat equity, and large mechanical equipment, as appropriate, to dig demonstration ponds.</p>
	<p>Component 1: Project preparation Component 2: Implementation of the small scale aquaculture development and promotion project</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Project preparation</p> <p>Activity 1: CAMP Secretariat obtains affirmation of support from all stakeholders</p> <p>Activity 2: Recruitment of main consultants (1 Team Leader and 1 Aquaculturalist)</p> <p>Activity 3: Appointment of Focal Points (1 per state = 2) and extension officers (3 per state = 6) from existing staff to support the project</p> <p>Activity 4: Establishment of project offices in Yei and Yambio</p> <p>Activity 5: Recruitment of local staff (administration, trainer) and casuals (cleaners, drivers, security)</p> <p>Activity 6: Site selection and recruitment of demonstration farmers (3 subsistence, 1 small scale commercial, at each of Yambio and Yei)</p> <p>Activity 7: Recruitment of International Associate Experts (6 x 2 year contracts) to assist the project, staggered deployment over the project.</p> <p>Activity 8: Liaison with NATRC regarding delivery of training</p> <p>Activity 9: Purchase of 2 pick up trucks and 10 motorbikes for transport of extension workers, International TA and Associate Experts staff</p> <p>Outputs: Administrative components for future implementation component, including recruitment of staff and establishment of offices in Yei and Yambio. Site selection for ponds. Operating equipment sourced.</p> <p>Component 2: Implementation of the small scale aquaculture development and promotion project</p> <p>Activity 1: Training of extension workers, both at NATRC and regionally in Uganda and Kenya</p> <p>Activity 2: Construction of demonstration ponds. Using paid labour, and some sweat equity. Demonstrator farms and subsistence farms around Yei and Yambio.</p> <p>Activity 3: Training of demonstrators and staff on demonstration ponds at the NATRC. Hatchery techniques, feeding, pond management, basic water quality maintenance, simple tools for water management, fish health, business management, HIV and other occupational diseases.</p> <p>Activity 4: Development of low technology tilapia hatcheries at the 2 newly established commercial farms. Training and mentoring of the farmers.</p> <p>Activity 5: Support to the few existing subsistence fish farmers around Yei and Yambio by including them in the training and support activities of the project</p> <p>Activity 6: Identification of prospective farmers and farming co-operatives (subsistence and small scale commercial). Yei and Yambio. Ongoing programme.</p> <p>Activity 7: Training of prospective farmers in fish husbandry, feeding, pond management, basic water quality maintenance, simple tools for water management, fish health, business management, HIV and bilharzia and other occupational diseases. Ongoing programme. Using NATRC and attachments to demonstrators' farms.</p> <p>Activity 8: Assistance to farmers to enable them to access credit from commercial banks.</p> <p>Activity 9: Extension work amongst fish farmers as they take up fish farming.</p> <p>Activity 10: Production of local language guides and Codes of Practice (COPs) and publicity materials covering all aspects of subsistence and small scale commercial</p>

Items	Information
	<p>aquaculture, HIV and occupational diseases: (with the NATRC).</p> <p>Activity 11: Support to suppliers of equipment and feed suppliers to aquaculture in Yei and Yambio, though assisting with equipment requirements and feed specifications for fish farmers, and assisting with applications for access to credit from banks.</p> <p>Activity 12: Support to fish farmers on post harvest issues, fish handling and marketing</p> <p>Activity 13: Purchase of 2 pick up trucks and 10 motorbikes for transport of Extension Workers, International TA and Associate Experts staff to replace the ones that have worn out.</p> <p>Outputs: Training of extension workers. 12 trained extension workers. 6 in Yei. County and 6 in Yambio County. Construction of demonstration farms. 3 demonstration subsistence farms in Yei and 3 in Yambio. Each 0.1Ha. 2 demonstration commercial farms, one in Yei and one in Yambio. Each 4ha. Training of demonstrators. 6 groups of subsistence farmers and 2 commercial managers and staff trained. 2 operating and financially self supporting commercial hatcheries established. About 80 ponds exist, but less than half produce and they are inefficient. These will be bought into production. Database of potential fish farmers set up. Trained prospective fish farmers. Funding for fish farm development in the private sector. Assistance to fish farmers on technical issues. Production of local language guides and Codes of Practice (COPs) and publicity materials. Manuals, posters, videos, COPs, copies of rules and regulations. A group of profitable private sector suppliers to the aquaculture industry. Quality fish delivered to the urban markets of Yei and Yambio, and to local communities. Interim and Final Review reports, lessons learned etc.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<ul style="list-style-type: none"> • National Aquaculture Training and Research Centre – used for training, demonstration, production of guides, COPs and publicity. • Private sector feed and equipment suppliers to the fish farming industry in the Greenbelt livelihood zone • Labour for building ponds (contracted services) • International TA and Associate Experts • Training institutions in Kenya and Uganda
(2) Description of beneficiaries within the framework of the project:	<ul style="list-style-type: none"> • Subsistence and small scale commercial fish farmers in the Greenbelt livelihood zone • Fish consumers in communities and in the urban areas of Yei and Yambio • Feed and equipment suppliers to the fish farming industry in the Greenbelt livelihood zone • NATRC: general support and income • Fish market traders

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<ul style="list-style-type: none"> • 8 private sector owned demonstration fish ponds, • 2 private simple tilapia hatcheries, • trained cadre of extension workers and fish farmers, • strengthening of the NATRC, • established suppliers of feed and equipment to the fish farming industry. • Trained staff and fish farmers, and private sectors trainers and demonstrators <p>It is presumed that there will some take up of fish farming by the private sector by fish farmers not directly supported as demonstrators.</p> <p>The impact will be immediate as within 8 months the first farms will be producing fish for local markets.</p>
(2) EIRR and/or FIRR, and/or other economic analysis:	(If applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td> Negative: b Positive: c </td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: b Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: b Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • The construction of fish ponds converts land that could be used for farming into land used for fish farming. There is no particular shortage of farming land in the Greenbelt livelihood zone and the project will only convert a small amount to fish farming so this is not a seriously negative issue. • Runoff from fish ponds is a problem in intensive systems as there can be a build up of nutrients which creates problems with plankton blooms and Dissolved Oxygen (DO) collapse in natural bodies receiving run off (eutrophication). This is only a problem for intensive commercial fish farming, since subsistence farms do not have sufficient inputs to raise pollutant levels in runoff. The commercial fish farms created by the project will be only "semi-intensive", and eutrophication should not be a significant problem. • No species used for fish farming in South Sudan will be introduced to the country or 		

Items	Information
	<p>transferred from areas outside the ecological zone. Genetically Improved Farmed Tilapia (GIFT) pose a threat to the wild genetic biodiversity of tilapia. Any introduction of GIFT will follow the Worldfish “Code of Practice and Manual of Procedures for the Introduction of GIFT to Africa”</p> <ul style="list-style-type: none"> • Disease may be a problem in fishing farming communities, as a result of contact with water and the water harbouring pathogens. It is possible that workers at the Aquaculture Centre could experience higher rates of Bilharzia (schistosomiasis) due to exposure to the causative agent in the ponds. Bilharzia tends to affect young people worst, before they have developed concomitant immunity. Treatment with Praziquantel is cheap, safe and effective. The water of the ponds and man made wetland will harbour mosquitoes which may lead to increased incidence of malaria. Malaria is endemic in the area. Symptoms and treatment are well known. The population has some innate and also some acquired immunity from long exposure. River blindness (Onchocerciasis) is transmitted by black flies (<i>Simulium sp</i>). Their larvae are, however, favour rapidly running water. There is normally little problem of river blindness associated with pond development. Tsetse fly, carriers of sleeping sickness, can sometimes be attracted to dense vegetation surrounding ponds. Although there are many other pathogenic bacteria, flukes and nematodes associated with fish and water, none of them are usually significant in aquaculture. <p>(Positive)</p> <ul style="list-style-type: none"> • Fish ponds, particularly subsistence ones, provide high quality protein for subsistence farmers and their communities. This is very valuable from a nutritional point of view. The project will however only establish 6 extra subsistence ponds in the short term. • Fish ponds can be valuable stores of water in communities, used by livestock for drinking, and in times of drought, valuable for other purposes. Food crop trees can be grown in the vicinity of fish ponds. • The project will introduce fish farming as a profitable business activity, and as a subsistence activity, creating incomes and employment widely throughout the Greenbelt livelihood zone for both men and women. • Aquaculture, being a new activity for South Sudan, does not have the strict gender related labour divisions common in many activities in South Sudan. It can therefore provide employment and income to women and women’s groups, as has already occurred in some of the subsistence and cooperatively owned fish farms in the Greenbelt livelihood zone.

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<p>There are about 80 subsistence fish ponds in the Greenbelt livelihood zone and less than half of these are operative. There are no demonstration ponds, and no small scale commercial fish farming.</p> <p>The indicator is the number of operating fish ponds, subsistence and small scale commercial fish farms.</p>
(2) Measurable indicators and situation at the end point:	<p>At the end of the project there should be 6 demonstrator subsistence fish ponds, 2 demonstrator small scale fish farms, and all the 80 already established subsistence fish ponds should have been bought into production.</p> <p>The indicator is the number of operating fish ponds, subsistence and small scale commercial fish farms.</p>
(3) Methods of measurement and sources of information:	<p>Project reports WES and CES annual reports MLFI reports through CAMP Secretariat NATRC reports</p>
(4) Responsible parties for the monitoring and evaluation:	<p>Project administration MLFI through CAMP Secretariat</p>

2.7 Required human resources

(1) Principle of human resources management:	<p>Project led, with states involvement in training and extension but the beneficiaries are private sector.</p>
(2) Required human resources in the public sector (Positions, grades and numbers):	<p>States 2 Focal points, one in each of Yei and Yambio 6 Extension workers in each of CES and WES</p>
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Private sector subsistence fish farmers and small scale commercial fish farmers.</p> <p>Consultants 1 Team Leader. 6 years (2 x 3 years contracts). Appropriate graduate qualification. Experience in running development projects in Africa. 15 years relevant experience 1 Aquaculturist. 3 years. (3 years contract). Appropriate experience and technical qualification. Experienced in aquaculture in Sub-Saharan Africa. Knowledge of hatchery techniques for tilapia an advantage. 8 years experience. 6 Aquaculture Associate Experts. 2 years each. Vocational qualification (preferred), Diploma or BSc or equivalent in Aquaculture. Practical abilities and experience in real aquaculture situations more important than academic qualifications. Teaching experience</p>

Items	Information
	would be a valuable asset.

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	M	L: Low	M: Medium	H: High	(select an indicator from the list)
(2) Explanation of expected risks:	<ul style="list-style-type: none"> • Weak or no buy in by the states government. • Problems getting credit for investment • Feed supplies poor or feed quality low • Problems with marketing (note that 70 tonnes per year is not a great quantity considering the population of the Greenbelt livelihood zone and the high demand for fresh fish) • Land issues (mitigated by the private sector using their own land) • There are no standards for fish feed in South Sudan. These will be developed as the industry expands, especially when large scale commercial fish farming is instigated by investors, but it is recommended that in the meantime the industry should use the FAO COPs for feeding fish. 				

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	Ultimately commercial aquaculture will produce the most fish, but the small commercial and subsistence farmers still have their part to play, and being owned by community members, have a great economic impact locally, provide employment are of great benefit in improving nutrition.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>Once the project is finished it is expected that investment in subsistence and small scale commercial aquaculture will continue using:</p> <ul style="list-style-type: none"> • Loans from commercial banks • Feeds and equipment from commercial outlets in the large towns • Advice from states' extension workers • Skills training (diplomas) and NVQs (national vocational qualifications) obtained from NATRC on a cost recovery basis • Inputs provided by NGOs and Donors in subsequent projects • Regional Aquaculture projects and initiatives
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Part 3: Project cost estimation

Project duration	Cost group	SSP/USD = 4																													
		Phase 1			Phase 2			Phase 3			Phase 4																				
		15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	Total	% to SSP 000 USD 000	% to total		
1 Management and operation of project																															
1 Deployment of government staff																															
1 Drivers, cleaners and security																															
2 Production of COPs and manuals																															
3 Procurement of professional services (contracted)																															
1 International consultant (team leader)																															
2 International consultant (aquaculture)																															
3 International consultant (associate)																															
4 Accountant, gopher, and trainer																															
5 International consultant (Evaluation)																															
4 Implementation of staff training																															
1 Training of extension workers & FPs at NATRC (per diem)																															
2 Training of extension workers & FPs at NATRC (transportation)																															
3 Training of extension workers & FPs at region (per diem)																															
4 Training of extension workers & FPs at region (transportation)																															
5 Implementation of research, studies and surveys																															
6 Delivery of extension and training services to the private sector																															
7 Operation and maintenance																															
1 Fuels for extension work																															
2 Fuels, etc. for distribution and dissemination of COPs & manuals																															
2 Construction of infrastructure and procurement of equipment																															
1 Construction of office buildings																															
1 Office building at each semi commercial farm																															
2 Construction of research, training and other specialized buildings																															
1 Hatchery building at each semi commercial farm																															
2 Feed store at each semi commercial farm																															
3 Construction of feeder roads																															
4 Construction of production, market and transportation facilities																															
1 Construction of subsistence ponds																															
2 Construction of semi commercial farming units																															
5 Acquisition of land																															
6 Procurement of vehicles																															
1 Pick up																															
2 Motorbike																															
3 Pick up																															
4 Motorbike																															
7 Procurement of equipment																															
1 Office ICT equipment																															
2 Hatchery equipment																															
3 Harvesting and feeding equipment																															
3 Subsidies, equity and loans																															
1 Provision of cash and/or in-kind subsidies																															
1 Specialist feeds																															

5.4.7 Development of urban fish market infrastructure project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Fisheries and aquaculture		
(2) Project name:	Development of urban fish market infrastructure project		
(3) Project ID:	04.09 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2015/16	Ending FY: 2039/40	Duration (years): 25
(5) Total investment:	SSP 10,460,000	USD 2,615,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FI.SA3	Public infrastructure development	Table 2-3
(2) Government organisation:	06	MAR-FA	Directorate of Fisheries and Aquaculture development	Table 2-6
	04	MAR-IM	Directorate of Investment, Marketing and Supplies	Table 2-6
(3) Activity types:	209	SP-EI	Service delivery/Infrastructure development – economic infrastructure development	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	X
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	X
(5) Planning time horizon (start):	01	PH1	Phase I (2015/15-2020/21, 5 years)	X
	02	PH2	Phase II (2020/21-2025/26, 5 years)	
	03	PH3	Phase III (2025/26-2030/31, 5 years)	
	04	PH4	Phase IV (2030/31-2040/41, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	X
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	X
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income		

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>Fish markets throughout South Sudan are inadequate for the purpose of selling fresh fish and processed fish products. Almost all fresh fish sales areas are grossly unhygienic. If cement they are difficult to clean with sharp corners and without sloping surfaces, often made of wood and bamboo, located in areas without proper drainage and without a potable water supply, nor with facilities for the safe and rapid disposal of waste water and refuse.</p> <p>Fresh fish is rarely, in itself, a source of food poisoning, due to the fish becoming unpalatable to the consumer before sufficient toxins develop from decomposition. However the conditions under which fresh fish is sold in all the main towns in South Sudan make the product liable to contamination, from flies, dust, unclean surfaces, consumers and vermin. This has the potential to be a major health problem, and also reduces the attractiveness of fish to the consumer, lowering prices and making fish wholesaling and retailing a less profitable economic activity.</p> <p>Smoked and dried fish is also wholesaled and retailed in poor conditions, often on the ground, and subject to attack by <i>Dermestes maculatus</i>, a beetle which together with its larvae is a major pest of dried and smoked fish in South Sudan, reducing its nutritive value and retail value. Smoked and dried fish, being displayed on the ground is also liable to attack from vermin, and contamination by both rats and dust borne pathogens. Many markets do not have sufficient undercover areas to keep the dried fish out of the rain and damp.</p> <p>The project will provide for improved retail markets in major towns in South Sudan so as to improve the conditions under which both fresh and smoke and/or dried fish are sold; leading to improved profitability in the supply chain, better nutrition and reduced incidence of disease.</p> <p>The project will have two distinct components.</p> <ul style="list-style-type: none"> • Component 1(one year) will related to design of fish markets suitable for the urban areas of South Sudan. This will be done by the national government through donor grants • Component 2 (24 years) will be a period when markets are constructed in the states. In this period a series of donors will be sought to fund construction, the states governments may fund construction from development funds, or municipal authorities may be able to source funding from donors or NGOs. So as to reduce planning costs the same basic but flexible design will be recommended for each market.
(2) Objectives:	<p>The objectives are to:</p> <ul style="list-style-type: none"> • Reduce costs in that the same design, bill of quantities and (outline) tender documents can be used for all urban fish markets constructed in South Sudan. • Improve the quality of fresh, dried and smoked fish offered for sale in urban areas of South Sudan • Increase the value of the fish catch in South Sudan • Reduce wastage in fresh, dried and smoked fish retailing in South Sudan • Improve nutrition through improving availability of fresh, smoked and dried fish • Increase incomes in rural areas through improving markets for their products and hence the value of the product at the landing site.
(3) Overall description including temporal and spatial extent of project:	<p>The project will produce a design of fish market suitable for 2 kinds of fish markets,</p> <ul style="list-style-type: none"> • fresh and • dried, salted and smoked. <p>This will be funded from a donor grant through the National Government</p> <p>Using these designs, improved fish markets will then be built in all 10 states' capitals. In the two larger towns (Malakal and Juba) 3 markets will be constructed. It is possible that more markets could be constructed in other larger towns as required.</p> <p>The way the latter stages of the project is to be funded, though different Municipalities, NGOs and DPs and States Governments, means that it will take a considerable time to complete the construction of fish markets. It is anticipated that all markets would not be complete until 2040.</p>
(4) Component structure:	<p>Component 1: Design of fish markets Component 2: Construction of fish markets in states</p>
2.2 Detailed description of project component, activity and outputs	
(1) Component, activity and outputs:	<p>Component 1: Design of fish markets (1 year) Activity 1.1: National Government, through MFLI seeks a donor prepared to fund the</p>

Items	Information
	<p>design of fish markets. This to include size and equipment options, but based on a single simple fundamentally sound design, based on Good Manufacturing Practice (GMP) for fish markets and HACCP¹⁶⁶ principles for each of fresh fish and smoked and/or dried fish.</p> <p>Activity 1.2: Contract awarded for design of fish markets. Designs, bills of quantities and template tender documents produced. The chosen architects and engineers design a suitable fish market for dried and/or smoked fish and another for fresh fish with flexibility as regards size and equipment.</p> <p>Activity 1.3: Design of fish markets, bills of quantities and template tender documents provided to all states, municipalities and town councils. All states administrations, town councils and municipal authorities are provided with the plans and given drawing drawings, cost estimates, template tender documents and bills of quantities for the fish markets in each configuration.</p> <p>Outputs: Designs for fresh and dried fish markets, with built in flexibility so that the markets can be of different sizes in different places. With technical drawings, bills of quantities and template tender documents for each size and/or configuration.</p> <p>Component 2: Construction of fish markets in states (18 minimum, perhaps more. 24 years)</p> <p>Activity 2.1: Identification and acquisition of land. Municipalities and states will identify land where the markets can be installed. The land area and utilities available must be in accordance with the size and complexity of the standard design chosen.</p> <p>Activity 2.2: Identification of individual funding sources. Municipalities, NGOs, DPs and States governments development budgets will be identified which can fund the construction of the markets</p> <p>Activity 2.3: Tender process for fish markets including award of tender. A restricted tender process will be undertaken using the designs, and bills of quantities prepared for the fish markets.</p> <p>Activity 2.4: Construction of fish markets. The markets will be constructed. Supervision of the construction will be in accordance with funding agencies norms.</p> <p>Outputs: 18 fish markets in 10 towns in South Sudan (minimum)</p> <p>It is important to emphasise that the two components are separate, in funding and in location. Component 1 is done by National Government and Component 2 is the responsibility of the States' Governments, municipalities and town councils in the states.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<p>Design engineers: produce plans, and bill of quantities for a variety of configurations of fish markets based on one basic design for each of fresh and dried and/or smoked fish</p> <p>Construction companies: build the various markets</p>
(2) Description of beneficiaries within the framework of the project:	<p>Construction companies: contracts</p> <p>Fishers and fishing communities: increase in value of catch, less wastage</p> <p>Fish market retailers: increase in value of catch, higher turnover, less wastage. Many of these retailers are women who will benefit from the improved markets</p> <p>Municipalities: hygienic fish market in town. Raised revenues from hire of stalls etc</p> <p>Consumers: better quality fish available. Better nutrition.</p>

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<p>Improved retailing of fish and fisheries products leading to higher economic activity in the fisheries sector as the demand for fisheries products increase and there is less wastage in the supply chain.</p> <p>Nutrition, protein availability in urban areas.</p> <p>Employment, better conditions of work</p>
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td> <p>Negative: a Positive: b</p> </td> <td> <p>Project:</p> <p>a: is likely to have minimal or little impact on the environment and/or society</p> <p>b: may have an impact on the environment and/or society</p> <p>c: is likely to have a significant impact on the environment and/or society</p> <p>d: will have a significant impact on the environment and/or society</p> </td> </tr> </table>	<p>Negative: a Positive: b</p>	<p>Project:</p> <p>a: is likely to have minimal or little impact on the environment and/or society</p> <p>b: may have an impact on the environment and/or society</p> <p>c: is likely to have a significant impact on the environment and/or society</p> <p>d: will have a significant impact on the environment and/or society</p>
<p>Negative: a Positive: b</p>	<p>Project:</p> <p>a: is likely to have minimal or little impact on the environment and/or society</p> <p>b: may have an impact on the environment and/or society</p> <p>c: is likely to have a significant impact on the environment and/or society</p> <p>d: will have a significant impact on the environment and/or society</p>		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • There will be little environmental impact from the construction of the buildings per se. <p>(Positive)</p> <ul style="list-style-type: none"> • The major impact will be the improvement in quality of fish available to consumers and the reduction in waste in retailing fish, both of which will have great impact on fishers and fish retailers, many of the latter being women. • Fish quality and prices are expected to improve with a corresponding increase in value 		

¹⁶⁶ Hazard And Critical Control Point (HACCP) a preventative food safety system

Items	Information
	of fish and a reduction in food borne diseases and infections.
2.6 Monitoring and evaluation for impact measurement	
(1) Measurable indicators and situation at a starting point:	Numbers of improved fish markets in South Sudan There are fish markets in all the larger towns of South Sudan. These all need improvement, preferably a new fish market at each site.
(2) Measurable indicators and situation at the end point:	Numbers of improved fish markets in South Sudan (minimum 18) Every state capital should have an improved fish market, with large towns such as Juba and Malakal having more than one.
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> • Design contract established • Designs and bill of quantities produced • Template tender documents prepared • Numbers of markets constructed • Inspection by states and other responsible for contracting markets • MLFI reports • States administrations reports • Municipal records
(4) Responsible parties for the monitoring and evaluation:	States administrations DPs/NGOs/Municipalities MLFI
2.7 Required human resources	
(1) Principle of human resources management:	Private contractors to design Private contractors to build
(2) Required human resources in the public sector (Positions, grades and numbers):	Routine requiring no extra staff. Municipalities have market management systems. Fisheries Administrations have extension workers and ancillary staff who monitor fish markets.
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	Decided by the private sector contractors.
2.8 Risk assessment with respect to project objectives and resources to be applied	
(1) Expected level of risk:	L L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	<p>The main risks are:</p> <ul style="list-style-type: none"> • Inability of the states and/or municipal authorities to attract external funding or secure local funding • Land issues on sites • Poor management by municipalities of the facilities after they have been built.
2.9 Other special considerations and/or notes	
(1) Other special considerations and/or notes:	<p>Fresh fish markets need to be simple and easy to clean, with a water supply, sloping floors, proper drainage and waste disposal. Some form of easily cleaned display is required in South Sudan. This can be in the form of sloping cement tables. No wood should be used even in the roof; iron and steel must be coated to stop rust. Some form of storage at the market site is desirable for keeping fish on ice in insulated boxes. It should be separated from any dried fish retail or storage areas and also have sloping floors drainage.</p> <p>Dried fish markets, or areas of fish markets designated for dried and/or smoked fish are a different design to fresh fish markets, and need less ancillary buildings and equipment. This is because dried fish needs to be kept away from water (and vermin) in a “dry goods” section, (and fresh fish needs a good and plentiful water supply to keep the location and equipment clean, and ice to keep the fish fresh). No wood should be used in construction and all steel should be coated. Storage for dried and smoked fish in godowns associated with the market is desirable.</p> <p>All markets need to be in or close to existing markets or retail areas. Vehicle access is important, for incoming fish and for ice deliveries.</p> <p>Most markets in South Sudan have public toilets, so there is no need to provide these. However a water supply and appropriate facilities for stall holders to clean their hands, stall areas and implements is required. This is also to wash down the fresh fish market. The dried and/or smoked fish market does not need a water supply for wash down, as they can be cleaned with a broom.</p> <p>Markets do not require an electricity supply. They need to be designed to be so that sufficient light enters the facility, and for this open sides and polythene glazed sections of roof suffice. Ice will be obtained from outside the facilities from private ice machines located in the towns.</p>

Items	Information
<p>2.10 Routine operation and required resources after the completion of the project</p> <p>(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.</p>	<p>All routine operation will be the responsibility of the municipality where the markets are situated.</p> <p>This will include:</p> <ul style="list-style-type: none"> • routine cleaning • pumping out of septic tanks if the drainage is not connected to mains sewerage • collection of dues and market fees • vermin control • routine maintenance and repair • security <p>These sorts of activities are self financing from market dues collected, and already within the ambit of the responsibilities of municipalities.</p>

5.4.8 Private sector establishment of feedmills for aquaculture

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Fisheries		
(2) Project name:	Private sector establishment of feedmills for aquaculture		
(3) Project ID:	0 4 . 1 0 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2022/23	Ending FY: 2039/40	Duration (years): 18
(5) Total investment:	SSP 252,000	USD 63,000	Note: Not including recurrent cost
(6) Private sector co-finance:	SSP 24,000,000	USD 6,000,000	

1.2 Project characteristics: (to be selected from Tables in Reference Book)

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FI.SA4	Private sector projects and businesses	Table 2-3
(2) Government organisation:	05	MAR-AP	Directorate of Animal Production and Range Management	Table 2-6
	06	MAR-FA	Directorate of Fisheries and Aquaculture Development	Table 2-6
(3) Activity types:	04	PPPI	Private Sector Project	Table 2-12

1.3 Project characteristics: (to be selected from the items below)

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	X
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	
	81	WA	Warrap State	
	82	NB	Northern Bahr el Ghazal State	
	83	WB	Western Bahr el Ghazal State	
	84	LK	Lakes State	
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	X
(5) Planning time horizon (start):	01	PH1	Phase I (2015/15-2020/21, 5 years)	
	02	PH2	Phase II (2020/21-2025/26, 5 years)	X
	03	PH3	Phase III (2025/26-2030/31, 5 years)	
	04	PH4	Phase IV (2030/31-2040/41, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	
	04	ISP	Ironstone Plateau	
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	X
(8) Funding sources:	11	NBF	National government budget/development fund	
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	X
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income		

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>Aquaculture is a subsector that has huge potential, in that the “Greenbelt” has year round water supplies, suitable terrain (many clay soil areas and gravity fed water supplies) and an almost ideal climate for aquaculture. Additionally the main species to be cultured (<i>Clarius gariepenus</i> – the African catfish and <i>Oreochromis niloticus</i> -the Nile tilapia) are both technologically suitable and native species to South Sudan. There may also be further opportunities for aquaculture in cages in the main rivers and lakes of South Sudan, and in the future, in irrigation and hydropower dams.</p> <p>Forecasts for the production from aquaculture for South Sudan by 2040 are as high as 70,000 tonnes, most of this from large scale commercial aquaculture in ponds and cages.</p> <p>Commercial scale aquaculture, either small scale and based on Integrated Agriculture Aquaculture (IAA) principles, or purely commercial, requires a reliable source of fish feed to thrive. Specialist fish feeds are required throughout the life of the cultured fish, from small granules starter feeds in hatcheries and nurseries to growout feeds in production ponds.</p> <p>The manufacture of aquaculture feeds presents special challenges to traditional feed milling concepts due to the aquatic medium in which the feed has to be delivered and ingested, and to the variety of the animals being cultivated. Moreover, farmed aquatic animals are generally considerably smaller than their terrestrial counterparts, such as pigs, poultry and cattle. Specialist extruding plant is required to make floating feeds (for Tilapia particularly), and the feeds have to be very carefully formulated.</p> <p>The establishment of a feedmill serving the aquaculture industry will be dependent on two external factors.</p> <ul style="list-style-type: none"> • The speed of development of feed mills for the small animal industry, notably chicken production. In the early stages the aquaculture Industry is unlikely to have sufficient demand for feeds to interest any private enterprise sufficiently to set up dedicated feed mills in South Sudan. However it is relatively easy for existing feed mills to produce bulk feeds for aquaculture, particularly for growing out, by adding equipment to the existing feed production lines and changing the ingredients as required. As demand increases it will be profitable to set up dedicated feed production facilities for aquaculture and produce the range of feeds required for hatcheries and nursery ponds. The Livestock sub-sector has a project for establishment of feedmills for chicken production, and aquaculture feed mills will develop in conjunction with this project. • There will have to be some incentives to the aquaculture industry which can assist the entrepreneurs in establishing these feed mills or adapting those producing feed for agriculture.
(2) Objectives:	<p>The objective is to establish a private sector local feed production capacity in South Sudan to satisfy the anticipated demand for high quality feeds from the aquaculture industry, which is expected to grow rapidly in the near future.</p> <p>The project is private sector led so the private sector is expected to make a profit.</p> <p>Although the project will have great benefits to the country through economic growth and food security, by providing inputs to the aquaculture industry, the immediate objective is profit orientated for the private sector.</p>
(3) Overall description including temporal and spatial extent of project:	<p>The private sector will produce feed for aquaculture when it sees the opportunity, though this will follow on from the development of feed production for agricultural purposes.</p> <p>The feedmills will be located either:</p> <ul style="list-style-type: none"> • in the Greenbelt Livelihood Zone, Yei in CES being the most suitable, being close to the source of much cereal production, and also near to Uganda, from where ingredients unavailable locally will be imported, including fishmeal. • in Juba, which has good communications for distribution of feed, and an all weather road to Uganda, as well as utilities and demand for poultry. • Possibly in Malakal and other locations in the Nile-Sobat Rivers Livelihood Zone, if cage farming in the Nile proves feasible. <p>The private sector investors will make the decisions on location.</p>
(4) Component structure:	<p>Component 1: Feed industry value chain study (undertaken by Livestock sub-sector)</p> <p>Component 2: Incentives</p> <p>Component 3: Site selection</p>

Items	Information
	Component 4: Acquisition of equipment Component 5: Supply of raw materials Component 6: Distribution Component 7: Certification

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Feed industry value chain study (undertaken by Livestock sub-sector) Activity 1.1: Desk study and field assessment of the top locations from desk study. 1 international assessment specialist with a background in agribusinesses will partner with 2 MLFI Agribusiness officers for 6 months to complete the desk study and field assessment. Output: Publically available feasibility study (for Livestock purposes, though it could include aquaculture.)</p> <p>Component 2: Incentives Activity 2.1: Incentives for investment in the aquaculture industry in South Sudan. These would take the form of tax incentives, and access to capital funding for equipment, inventory and buildings. Output: List of tax exempt good and services. List of other tax incentives for aquaculture. Development Bank or Agricultural Bank loan scheme for aquaculture and fisheries.</p> <p>Component 3: Site selection Activity 3.1: Private sector investor responsibility. The design and location of a feed mill should be guided by the customers it is to serve with important consideration given to whether or not an area is prone to flooding. Criteria: Land available in the correct location. Tenure assured. It is important that the mill be located so that any impacts from wet conditions are minimized Communications with good sources of supply for ingredients and for distribution of feed to customers. Roads/rivers predominantly. Output: Sites for feedmills selected (by private sector)</p> <p>Component 4: Acquisition of equipment Activity 4.1 Feedmill equipment is available from a variety of suppliers, though the cheapest is probably from India or China, and the best quality from Europe or USA. All decisions on feedmill equipment will be made by the investors from the private sector. "Component 2 Incentives", will be important for reducing the burden of tax on the import of equipment, and possibly for financing its acquisition. Output: Import of specialist aquaculture feedmill equipment (the most expensive item being specialist extruders)</p> <p>Component 5: Supply of raw materials Activity 5.1: The likely origin of the raw materials must be ascertained. Cereals, fishmeal, oils, binders and micronutrients are all required and initially will be mostly imported but as time goes on locally grown crops will become available, notably maize, cassava, cottonseed cake and sorghum. (Fishmeal currently makes up 30% of most growout tilapia feeds, but breeders need a higher percentage of fishmeal, up to 40%) South Sudan has no fishmeal production but tilapia feeds are now being developed that use soyabean and other vegetable sources as a fishmeal substitute, particularly for growout). Output: Sources of feed established. Imports initially but increasingly local sources</p> <p>Component 6: Distribution Activity 6.1: Storage and distribution of feeds will require waterproof, pest proof godowns in area not liable to flooding and a distribution network, initially based on road transport. As the aquaculture industry increases in size, local feed mills for production nearer the sources of demand in the greenbelt could be possible. The private sector will, as always, make all investment decisions based on commercial criteria. Output: A network of distribution centres for feed throughout the country. These will probably be established initially for chicken and pig production, and aquaculture feeds can use the same establishments. (as in Uganda)</p> <p>Component 7: Certification Activity 7.1: Most modern feedmills for aquaculture comply with regulations designed for human feed. This is because feed for aquacultured organisms is so intolerant of contamination and toxic ingredients such as aflotoxins. The Global Aquaculture Alliance Best Aquaculture Practices standards is a certification system that combines site inspections and effluent sampling with sanitary controls, therapeutic</p>

Items	Information
	<p>controls and traceability. This would be a suitable standard to aim for in the long term. Under the new fisheries law and regulations the minister will be able to bring into effect any necessary regulations required to control aquaculture feed production, content and distribution. In the meantime it would be appropriate if the feed mills follow the FAO/WHO Code of Practice on good animal feeding (CAC/RCP 54-2004).</p> <p>Outputs: To ensure compliance with local and international norms, and regulations. High quality feed available to aquaculturalists through south Sudan</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<ul style="list-style-type: none"> • Feed industry value chain study: Consultants, provided under Livestock project • Incentives: Provided by the Government under a larger tax and incentives scheme in the agriculture/ forestry/ livestock/ fisheries sector. • Finance: Development Banks and loan providers, also under a larger finance scheme in the agriculture/ forestry/ livestock/ fisheries sector. • Equipment: Agents and shippers • Raw materials: Regional commodity traders and local crop producers in SS • Certification: Competent Authority and Global Aquaculture Alliance
(2) Description of beneficiaries within the framework of the project:	<p>Suppliers of equipment and raw materials. Fish farmers whose feed supply is cheaper and more reliable than before</p>

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<p>As the aquaculture feed industry increases in size, perhaps to 100,000 tonnes per year by 2039, the amount of locally sourced raw material will increase. This will provide great opportunities for farmers of grains and root crops such as cassava in that it will be a guaranteed market for their products. This will also lead to increased land use for agriculture, higher yields in agriculture, increased incomes and improved economic activity throughout agrarian society. A very positive effect of this project.</p> <p>The 70 thousand tonnes of feed produced will of course go to producing fish for local consumption and export.</p>
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td> <p>Negative: a Positive: c</p> </td> <td> <p>Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society</p> </td> </tr> </table>	<p>Negative: a Positive: c</p>	<p>Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society</p>
<p>Negative: a Positive: c</p>	<p>Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society</p>		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • The project itself will have a very low impact as feed mills do not create significant pollution, and have a very small environmental foot print. However, more land will be used for producing feeds for aquaculture. • In the long run the increase in aquaculture activity may lead to an increase in occupational diseases in fish farming communities, but this is an indirect affect. • Feed for aquaculture is high protein, roughly 30-35%, and most of this comes from fish. The sourcing of this protein input from fish is environmentally and socially suspect, in that it can lead to overfishing and makes edible fish not available for human consumption. In the long term this ethical and environmental dilemma will most likely be solved by creating varieties of plant, such as soya bean, that are genetically modified to produce appropriate proteins. <p>(Positive)</p> <ul style="list-style-type: none"> • Markets for crops will be increased leading to stability of supply and improved living conditions for rural farmers. • More fish will be produced for improved nutrition and employment. • Feedmills provide direct employment for women in packing and marketing, and in retail premises. In that many of the inputs to feed are produced by women this project should enhance income and employment for women operating in the crops sector. 		

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<p>Number of feedmills producing feed for aquaculture There are currently none in South Sudan</p>
(2) Measurable indicators and situation at the end point:	<p>Numbers of feed mills in South Sudan and production of aquaculture feeds. This will depend on the rate of increase in investment in commercial aquaculture. Possibly 25 feedmills with aquaculture feed capability and production of 100,000 tonnes of feed, including specialist feeds for hatchery and nursery operations.</p>
(3) Methods of measurement and sources of information:	<p>Inspection and licensing Feedmill company reports MLFI annual reports Import statistics</p>

Items	Information					
(4) Responsible parties for the monitoring and evaluation:	Export statistics					
	MFLI Ministry of Finance (incentives) Ministry of Trade (import/export)					
2.7 Required human resources						
(1) Principle of human resources management:	All personnel will be recruited and employed by the private sector					
(2) Required human resources in the public sector (Positions, grades and numbers):	None					
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	Private sector decision					
	Possibly up to 600 jobs will be created in the production and supply and distribution of livestock and fish feeds.					
2.8 Risk assessment with respect to project objectives and resources to be applied						
(1) Expected level of risk:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="text-align: center; width: 50px;">M</td> <td style="text-align: center; width: 50px;">L: Low</td> <td style="text-align: center; width: 50px;">M: Medium</td> <td style="text-align: center; width: 50px;">H: High</td> <td style="text-align: center;">(select an indicator from the list)</td> </tr> </table>	M	L: Low	M: Medium	H: High	(select an indicator from the list)
M	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	<ul style="list-style-type: none"> • Rate of development of poultry industry (a precursor to the aquaculture feeds industry) • Rate of development of commercial aquaculture • Sources and quantity availability of raw materials • Financing proves difficult • Tax and other incentives not applied to feed industry • Land availability and land tenure • There are no standards for fish feed in South Sudan. These will be developed as the industry expands, especially when large scale commercial fish farming is instigated by investors, but it is recommended that in the meantime the industry should use the FAO COPs for feeding fish • No legislation on feeds - to be developed by a CAMP sponsored project. 					
2.9 Other special considerations and/or notes						
(1) Other special considerations and/or notes:	The whole project relies on developments in the livestock sector creating the initial demand for feeds for poultry production. Aquaculture will not provide sufficient initial stimulus on its own.					
2.10 Routine operation and required resources after the completion of the project						
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	Private Sector activity.					

5.4.9 Private sector establishment of ice production facilities

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Fisheries		
(2) Project name:	Private sector establishment of ice production facilities		
(3) Project ID:	0 4 . 1 1 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2015/16	Ending FY: 2039/40	Duration (years): 25
(5) Total investment:	SSP 0	USD 0	Note: Not including recurrent cost
(6) Private sector co-finance	SSP 68,400,000	USD 17,100,000	

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FI.SA4	Private sector projects and businesses	Table 2-3
(2) Government organisation:	06	MAR	Directorate of Fisheries and Aquaculture Development	Table 2-6
(3) Activity types:	302	PS-MF	Private Sector Manufacturing	Table 2-12
	303	PS-TR	Private Sector Trade	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	X
(5) Planning time horizon (start):	01	PH1	Phase I (2015/15-2020/21, 5 years)	X
	02	PH2	Phase II (2020/21-2025/26, 5 years)	
	03	PH3	Phase III (2025/26-2030/31, 5 years)	
	04	PH4	Phase IV (2030/31-2040/41, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	
	04	ISP	Ironstone Plateau	
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	X
(8) Funding sources:	11	NBF	National government budget/development fund	
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	X
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income		

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

Installing and managing ice machines is not a suitable activity for National or States Governments to be involved in.

The private sector is already active in installing ice machines where there is demand for ice. Ideally the private sector will continue to install ice machines throughout the country as demand for ice rises.

There are 5 private working block ice plants in Juba (2014). They are all based on cement tanks with chilled brine made from sodium chloride salt, with iron moulds, using water from the Urban Water Supply Corporation, delivered by lorry. One plant had a borehole but the water is reported to be saline and the operator no longer uses it. All use R22 refrigerant and sodium chloride for the brine, both imported from Kampala.

There is one other large ice machine in South Sudan, in Malakal, UNS. Very similar in design to those in Juba. The salt comes from Sudan, originating on the Red Sea. This plant has been looted during the recent troubles there, so is no longer operating. The owner is intending to set up a bottled water plant.

Reports of 2 working plants in Bor, in Jonglei State have proved to be misinformation.

Some supermarkets in Juba sell party ice from small “restaurant” type ice machines.

Juba ice machines have a theoretical total potential production of 70 tonnes/day, though with added equipment this could be enhanced quite rapidly: in all ice plant there is only one harvest per 24 hours per brine tank and this could be increased to two harvests per day by adding cooling capacity.

Ice can be used for many applications, amongst others:

- Preserving fish
- For cooling drinks for retail or home and at parties and picnics (this is currently the largest use of ice in South Sudan)
- Transport and storage of vaccines
- Transport of meat and chickens between slaughter and retail
- In bread making in hot countries to chill the dough and slow the action of the yeast
- Chilling fruit
- At chicken slaughter units
- Preserving corpses for short periods in the absence of refrigerated morgues or for transport to burial in far off towns and villages.
- In construction in hot countries to cool cement to increase setting time and reduce setting temperatures, leading to a stronger product.

Not all of these uses are immediately applicable to the present situation in South Sudan; but all are anticipated as the country develops over the next 25 years. The private sector will respond to need rapidly, as has been indicated by its activities to date.

Note that ideally each kilo of fish production requires 3 kilos of ice to get it to market. If the potential sustainable catch is 200,000 tonnes, and one third of this is iced then this means an ice production of at least 500 tonnes per day countrywide. This would be concentrated in the Nile-Sobat Rivers Livelihood Zone where the most of the production is located. Added to this is another potential demand from aquaculture which could be as much as 575 tonnes per day by year 2040. Hence a demand for more than 1,000 tonnes per day is feasible just to supply the requirements of fisheries and aquaculture by 2040; 15 times the present capacity. As more of the catch is iced, then the demand will increase further depending on how long this takes to occur. (Note that 1000 tonnes/day is not, in fisheries terms, a large amount of ice availability for a whole nation. When all other uses are taken into account one would expect the ice production industry to expand far beyond this size with time).

Ice is an ideal medium for preserving fish:

- It is transportable.
- It has a very large cooling capacity for a given weight or volume,
- One plant can serve many disparate areas.
- Ice is non toxic
- Ice has no moving parts
- The technology of its use is easily taught to fishers

Items	Information
	<ul style="list-style-type: none"> • It cools fish rapidly to an ideal temperature for preservation without freezing them • It cleans the fish with the meltwater • It is relatively cheap. • The equipment necessary for a fisherman to use ice is simple – all that is required is an insulated box with a drain and a lid, and a scoop, usually made out of an old plastic cooking oil container. • The technology to make ice is relatively simple (particularly block ice) • Iced fresh fish receives a premium price in the market, compared to frozen or dried/smoked. <p>The (fisheries) problems that this project seeks to overcome are:</p> <ul style="list-style-type: none"> • Problem 1: Most of the country has not got access to ice, which is important if the capture fishery is to develop. For maximising returns from fish, the industry has to have access to ice. Presently most of the catch is dried, whereas if this fish were sold fresh its value would increase considerably. • Problem 2: Aquaculture production is expected to increase rapidly in the Green Belt. Up to 70,000 tonnes of fish are expected to be produced by 2040. There is currently no availability of ice in the Green Belt at all except in Juba. For transport and processing of the products of aquaculture, for local consumption or export, ice supply will be a necessity. • Problem 3: The eventual export of fresh fish will require availability of ice at all stages in the cool chain, at capture, storage, transport to central location, in the factory and for value adding. Ice is required for all this. • Problem 4: There is no “safe” water supply for production of ice anywhere in South Sudan outside of Juba, and even the Juba supply is subject to periodic contamination.
(2) Objectives:	<ul style="list-style-type: none"> • Profitable operation of ice machines countrywide by the private sector leading to availability of ice for fish preservation • Potable water used to make ice, so as to satisfy HACCP (a method of quality control for foods) and Good Manufacturing Practice • Increased value of the fish catch • Exports of high value fish • Reduction in post harvest losses
(3) Overall description including temporal and spatial extent of project:	<p>The private sector will invest where it expects to be able to make and sell ice at a profit. These locations are likely to be (for fisheries) in towns in the Nile-Sobat Livelihood Zone area and also in major towns away from the Nile-Sobat Livelihood Zone where fish is retailed.</p> <p>It is important to recognise that the main investment decisions by the private sector will not be based on fisheries alone. Anywhere where ice demand is likely to be high will be a target for investment. Those areas with poor power supply and few domestic refrigerators are ideal for ice production as the population buys lots off ice for chilling drinks. (Most of the ice now produced in Juba goes for chilling drinks).</p> <p>The private sector will invest gradually as opportunity presents itself. With the huge expected demand more than 40 extra plants may be expected to be installed by 2040, some of these within fish processing plants where value addition is done or from where fish are exported.</p> <p>The funding for these ice machines is expected to be provided by:</p> <ul style="list-style-type: none"> • Direct inward investment (mostly from the SS Diaspora) • Direct inward investment (regional – mostly N Africa) • Bank loans and other sources of local finance • Development Bank or Agricultural Bank loans <p>It is also anticipated that the GRSS will have implemented a system of tax incentives to investors who invest in the sector. These may be in the form of import tax reduction on essential equipment, reduction in taxes on profits in the fisheries/aquaculture sector, and possibly even subsidies on operating costs (reduction in diesel or electricity costs for essential industries). These incentives will also contribute to the installation of ice machines.</p>
(4) Component structure:	<p>Component 1: Installation of ice machines Component 2: Installation of water treatment plant</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1: Installation of ice machines Activity 1.1: Private Sector makes all investment decisions as to location, type of equipment and size of equipment. Probably 40 units by 2040. Output: Extra 400 tonnes of daily ice production in South Sudan for fisheries purposes</p> <p>Component 2. Installation of water treatment plant.</p>
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Items	Information										
	<p>Activity 2.1: To provide clean water to the ice production facilities (Will be required by the Competent Authority by 2023). Water treatment plant at each ice installation. Output: Clean water for ice, satisfying HACCP requirements</p>										
2.3 Service providers and beneficiaries											
(1) Description of service providers within the framework of the project:	<p>Banks providing loan funds Equipment suppliers (India and China mainly)</p>										
(2) Description of beneficiaries within the framework of the project:	<p>Fishermen Fish traders and retailers Fish exporters Drinks sellers and other ice users (see other users of ice above)</p>										
2.4 Outcomes, impact and contributions to value added (i.e. economic growth)											
(1) Outcomes and impact:	<p>The main outcome will be an increase in the value of part of the fish catch, which will be sold fresh instead of smoked or dried. The increase in value per annum by 2040 (assuming that one third of the catch is iced) will be SSP 1.4 billion. Some fish will be retained for sale instead of being thrown away. The amounts are not huge however. This will lead to increased incomes for fishing communities, traders, retailers and exporters. It is presumed that the ice plant would run at a profit for the private sector operators.</p>										
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)										
2.5 Environmental and social impact, and mitigation measures											
(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1" style="width: 100%;"> <tr> <td style="width: 20%;">Negative: a</td> <td>Project:</td> </tr> <tr> <td>Positive: c</td> <td>a: is likely to have minimal or little impact on the environment and/or society</td> </tr> <tr> <td></td> <td>b: may have an impact on the environment and/or society</td> </tr> <tr> <td></td> <td>c: is likely to have a significant impact on the environment and/or society</td> </tr> <tr> <td></td> <td>d: will have a significant impact on the environment and/or society</td> </tr> </table>	Negative: a	Project:	Positive: c	a: is likely to have minimal or little impact on the environment and/or society		b: may have an impact on the environment and/or society		c: is likely to have a significant impact on the environment and/or society		d: will have a significant impact on the environment and/or society
Negative: a	Project:										
Positive: c	a: is likely to have minimal or little impact on the environment and/or society										
	b: may have an impact on the environment and/or society										
	c: is likely to have a significant impact on the environment and/or society										
	d: will have a significant impact on the environment and/or society										
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> Ice production in itself has little environmental impact. There are no toxic substances used and the refrigerants are now ozone friendly. Ammonia (toxic) is no longer used and R12 (ozone depleting) refrigerant has been phased out completely. There is no significant polluting effluent from ice production. Water use is small. <p>(Positive)</p> <ul style="list-style-type: none"> The biggest impacts will be on fishers and fishing communities, in that they will be able to obtain better prices for the product of their labour. (This may lead to some conflict with other neighbouring fishing communities over resource rights but should be mitigated by other projects to be implemented by the MLFI covering Fisheries Organisations and co-management measures for capture fisheries). Additionally these benefits move along the whole cool chain, to traders, retailers, exporters and consumers. Due to the heavy nature of the work men tend to be employed in ice factories. There may be some effects on womens work patterns where women process fish for dried or smoked fish in fishing communities (note that in South Sudan much fish is processed by men, contrary to “accepted wisdom”). This will result from the move to iced fish, which reduces the amount of processing that needs to be done. Ice use will reduce the amount of firewood used to smoke fish, as more fish will be sold fresh. This will reduce deforestation. 										
2.6 Monitoring and evaluation for impact measurement											
(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> 5 operating ice machines in Juba, with a capacity of 70 tonnes/day of ice production. One ice machine in Malakal needing repair. Indicator is the absolute numbers of operating ice machines and their capacity. No safe water used for production of ice. Indicator is the number of ice plant with water treatment plants 										
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> At least 50 ice plants operating by 2040 with a production of 1000 tonnes of safe ice/day. Indicator is the absolute numbers of operating ice machines and their capacity. All 50 ice plants use safe water. Indicator is the % of ice plant with water treatment plants that pass Competent Authority inspection (should be 100%) 										
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> Visual Inspection Import statistics MLFI annual reports States annual reports 										
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> States fisheries Administrations MLFI 										

Items	Information					
2.7 Required human resources						
(1) Principle of human resources management:	Private sector makes all decisions					
(2) Required human resources in the public sector (Positions, grades and numbers):	None. All activities such as inspections will be routine.					
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	Once constructed each ice plant would be expected to have: <ul style="list-style-type: none"> • 1 supervisor/administrator • 1 plant manager/engineer • 1 Ice sales manager • 8 Shift Labourer (2 x 2) • 4 guards (as required, maybe more) • 50 plants means a total increase in employment by more than 750 people countrywide by 2040 					
2.8 Risk assessment with respect to project objectives and resources to be applied						
(1) Expected level of risk:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; text-align: center;">L</td> <td style="width: 25%; text-align: center;">L: Low</td> <td style="width: 25%; text-align: center;">M: Medium</td> <td style="width: 25%; text-align: center;">H: High</td> <td style="text-align: right;">(select an indicator from the list)</td> </tr> </table>	L	L: Low	M: Medium	H: High	(select an indicator from the list)
L	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	<ul style="list-style-type: none"> • Continued civil disturbance • Lack of credit/funds to pay for capital equipment (ice machines and water treatment plant). • Availability of interested investors • Availability of sites • Insufficient take up by fishermen of ice use (a training and awareness problem), mitigated by establishment of Padak Fisheries Training Centre activities in extension and amongst fishing communities. • Informal taxation which is a major problem in some areas • Availability of equipment and spares and ice and R22 refrigerant (all currently imported). • Overfishing of the resources. No fish = no fishing industry 					
2.9 Other special considerations and/or notes						
(1) Other special considerations and/or notes:	The private sector is adept at exploiting commercial opportunities, and in the case of ice production is already doing so. Ice is the key to the production of high quality fish for local consumption and export. Availability of ice is therefore paramount to the development of the Capture Fisheries.					
2.10 Routine operation and required resources after the completion of the project						
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	None. All activities by government (inspection etc.) are completely routine within existing ambits. Private sector project. In essence the private sector will address any routine requirements.					

5.4.10 Private sector promotion of large scale commercial aquaculture

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Fisheries		
(2) Project name:	Private sector promotion of large scale commercial aquaculture		
(3) Project ID:	0 4 1 2 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2023/24	Ending FY: 2039/40	Duration (years): 17
(5) Total investment:	SSP 0	USD 0	Note: Not including recurrent cost
(6) Private sector co-finance:	SSP (not estimated)	USD (not estimated)	

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FI.SA4	Private sector projects and businesses	Table 2-3
(2) Government organisation:	06	MAR-FA	Directorate of Fisheries and Aquaculture Development	Table 2-6
(3) Activity types:	310	PS-PR	Private sector - Production	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	X
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	
	82	NB	Northern Bahr el Ghazal State	
	83	WB	Western Bahr el Ghazal State	
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	X
(5) Planning time horizon (start):	01	PH1	Phase I (2015/15-2020/21, 5 years)	
	02	PH2	Phase II (2020/21-2025/26, 5 years)	X
	03	PH3	Phase III (2025/26-2030/31, 5 years)	
	04	PH4	Phase IV (2030/31-2040/41, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	
	04	ISP	Ironstone Plateau	
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	X
(8) Funding sources:	11	NBF	National government budget/development fund	
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	X
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>Aquaculture has the potential to transform the economy in the South West of the South Sudan; in the Greenbelt livelihood zone.</p> <p>It is likely that aquaculture in this region will expand rapidly and perhaps 70,000 tonnes of fish will be produced by 2040, 85 to 90 % of that from medium to large scale commercial intensive fish farms. The balance will be produced by small scale local commercial fish farmers using semi intensive methods and subsistence ponds in villages based on Integrated Agriculture Aquaculture systems.</p> <p>Subsistence fish farming, although of great benefit to the families that own ponds, has limited effect on general levels of fish protein consumption, simply because the areas and production rates are so small. Similarly small scale commercial fish farming, although very effective at supplying local markets and very suitable for locally based investors, are also small enterprises with only a moderate effect on overall fish production.</p> <p>Large scale commercial fish farming, using intensive methods (large amount of inputs, high levels of environment control in the ponds, and skilled round the clock management) can transform the aquaculture industry in South Sudan, and fortunately the Greenbelt Livelihood Zone is suitable for this kind of investment. Here the conditions, hydrology, soils, gravity fed streams, temperature and rainfall patterns are ideal for aquaculture.</p> <p>Further north, in the great floodplains of the Toic¹⁶⁷ and swamps of the Sudd, aquaculture does not have such potential, due mainly to the topography of the land (very flat) and seasonal flooding. Similarly in the pastoral lands to the north west the rainfall patterns and temperature conditions are not so favourable as in the Greenbelt Livelihood Zone</p> <p>It may be possible to introduce cage farming in suitable areas of the Nile/Sobat Rivers Livelihood Zone area and in lakes if environmental concerns can be overcome. Similarly in the future there may be opportunities for fish farming in irrigation schemes, either fish/rice culture, cage culture in dams, or wide scale ranching in irrigation channels and canals. Hydropower dams also may present further opportunities. At the moment there are no suitable irrigation schemes or dams.</p> <p>This is not a suitable direct investment area for government, nor for direct government intervention. On a more practical level the high level of management and technical skill, and the dedication required by staff for intensive fish farming far surpasses anything that government workers can be expected to maintain.</p>
(2) Objectives:	<p>The objective is to encourage large scale commercial aquaculture investment in South Sudan, firstly in the Greenbelt Livelihood Zone, and then elsewhere, probably in the Nile-Sobat Rivers Livelihood Zone, if opportunities present themselves.</p>
(3) Overall description including temporal and spatial extent of project:	<p>For large scale aquaculture to develop the government must act in some areas, which are detailed below in Component 1. These might be called pre-requisites to investment in the sector. They will create the enabling environment which investors seek.</p> <p>Similarly tax incentives for investment and sources of funding will have to be found. These are detailed in Component 2.</p> <p>The area covered will be Greenbelt Livelihood Zone and the Nile-Sobat Rivers Livelihood Zone (where suitable sites exist for aquaculture) Investment is likely to begin in 2020 and continue onward from there.</p>
(4) Component structure:	<p>Component 1: Establishment of enabling environment Component 2: Finance and tax incentives</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1: Establishment of enabling environment, Pre-requisites for large scale commercial aquaculture in South Sudan. For large scale aquaculture to develop the government must act in some areas. Without these actions, large scale aquaculture development will be delayed or fail to materialise.</p> <p>Activity 1.1: The legal basis for aquaculture, and aquaculture feedstuff production needs to be put in place in the revised legislation.</p> <p>Activity 1.2: Subsidiary regulations covering aquaculture need to be enacted.</p> <p>Activity 1.3: Codes of Practice need to be prepared, though in the interim the FAO COPs could be used, and included in the regulations.</p>
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¹⁶⁷ the area that floods during the wet season but in the dry season retains enough water to provide pasture for livestock. A Dinka word.

Items	Information
	<p>Activity 1.4: Feedstuff COPs and regulations need to be enacted Activity 1.5: Land tenure problems must be rectified so that the land title to the ponds is secure for the period needed. Activity 1.6: Quarantine controls for aquaculture must be designed and enforced so as to stop unlicensed introductions and transfers (these will be enforced under Livestock sub-sector quarantine activities) Activity 1.7: Water pollution and other environmental regulations must be developed and applied so that water resources are not adversely affected by commercial aquaculture. Activity 1.8: A Competent Authority must be established to control Quality Assurance, especially for exports Activity 1.9 General security has to improve so as to attract foreign investors who have the option to invest elsewhere in the world. Outputs: Laws, regulations, COPs, quarantine, environmental COPs and security</p> <p>Component 2: Finance and tax incentives. Commercial Aquaculture needs funding. The decision to invest or not will depend on the private sector investor. Activity 2.1: The investments may require funding which will be through commercial bank, Development Bank or Agriculture Bank Loans.. Activity 2.2: GRSS may consider it appropriate to set up a loan fund to encourage commercial large scale aquaculture, or may allow large scale commercial aquaculture access to government sponsored loan funds intended for agriculture. Activity 2:3 GRSS may consider tax and other financial incentives for large scale commercial aquaculture Outputs: Loan funds, tax and commercial incentives to large scale commercial aquaculture</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	Government - for laws and regulations, tax and commercial incentives. Banks for loan funds Donors for dedicated agricultural loan fund that can be used by aquaculture
(2) Description of beneficiaries within the framework of the project:	Large scale aquaculture industry. Investors in aquaculture in South Sudan Banks/loan funds

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	The project will contribute to employment, economic growth, food supply and food security, through increasing the amount of aquaculture being undertaken in South Sudan, and exports.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: c Positive: c</td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: c Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: c Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<ul style="list-style-type: none"> • The project in itself will have little impact, either socially or environmentally. (Negative) • As and when farms are established separate environmental impact assessments (EIAs) should be carried out for each investment. These EIAs will cover introductions and transfers, water quality issues, waste water, eutrophication, feed issues and occupational diseases. If the EIAs are properly done and the regulations on waste water are applied, through the insistence of mitigation measures, commercial aquaculture can be environmentally safe. There is a danger that in the rush to attract direct foreign investment, less than scrupulous operators may be allowed to set up operations without proper environmental controls on their operations. (Positive) • As ponds become established there will be a significant economic and social impact. The production of fish will go towards creating employment, and improving nutrition and food security, through the production of fish. Economic activity will increase through exports and local sales, as well as the purchase of inputs from feedmills, utilities suppliers, and gear and net suppliers. • The management of large fish farming enterprises seems to be dominated by men. In fish processing and retailing women tend to outnumber men by considerable margins. In processing this is due to women being perceived as having more nimble fingers so reducing wastage in the delicate tasks such as filleting and trimming. 		

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and	Indicator: Number of large intensive fish ponds in South Sudan
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Items	Information
situation at a starting point:	Situation at start point: None
(2) Measurable indicators and situation at the end point:	Indicators: Number of large intensive fish farms/cage culture sites in South Sudan. Culture fish production. Exports of fish. Situation at end point: At least 100 intensive fish farms/cage culture sites in South Sudan. 60,000 tonnes of aquaculture production
(3) Methods of measurement and sources of information:	Measurement: Absolute numbers. Sources: Tax records, banks and financiers reports, monthly and annual reports from MLFI and states.
(4) Responsible parties for the monitoring and evaluation:	NATRC States aquaculture departments MLFI Banks and financiers

2.7 Required human resources

(1) Principle of human resources management:	Completely private sector
(2) Required human resources in the public sector (Positions, grades and numbers):	All to be done as part of MFLI and other government bodies routine responsibilities. No extra personnel required.
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	All decided by the private sector Note that intensive aquaculture does not employ a large amount of people directly. On the fish farms the numbers of labourers and technicians are low, though they tend to be highly skilled. Intensive aquaculture does however have considerable effects on employment both upstream (feed, supplies) and downstream (processing, marketing) which creates employment.

2.8 Risk assessment with respect to project objectives and resources to be applied

	M	L: Low	M: Medium	H: High	(select an indicator from the list)
(1) Expected level of risk:					
(2) Explanation of expected risks:	<p>The risks from large scale aquaculture are mainly environmental.</p> <ul style="list-style-type: none"> • Pollution from effluent discharge from ponds or directly into water bodies from cages. • Illegal introductions of undesirable species • Introductions of fish diseases • Genetically improved fish escaping and breeding with natives species, weakening the wild stock • Production of fish containing antibiotics and chemicals used in controlling fish diseases • Pollution of the environment from additives, antibiotics and other chemicals added to fish feeds and as disease control. <p>Control of these risks depends on government creating the necessary legislation and regulations and then enforcing them.</p> <p>The risks to the investors are:</p> <ul style="list-style-type: none"> • Land tenure problems • Feed problems due to poor quality and poor enforcement of COPs • Illegal introductions and transfers – weak quarantine • Government failures to guarantee security • Export quality assurance failures, no Competent Authority established • Tax and financial incentives for the sector are not forthcoming or subject to too much corruption to be useful • Credit/loans is difficult to come by • General insecurity <p>Nearly all of these require Government action, so the onus is on the Government to create and maintain the enabling environment for aquaculture to succeed. If they do not then difficulties will occur.</p>				

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	Inward direct investment by foreign investors is more likely in this type of fish farming than in small scale commercial fish farming, however the foreign investors can easily get back on the plane if they find the investment climate unsuitable, as has already happened.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	All up to the private sector. They may decide to pull out or to invest further.
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Part 3: Project cost estimation

(no cost estimated)

5.4.11 Development of fish landing site infrastructure project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Fisheries		
(2) Project name:	Development of fish landing site infrastructure project		
(3) Project ID:	0 4 . 1 3 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2030/31	Ending FY: 2037/38	Duration (years): 8
(5) Total investment:	SSP 124,738,000	USD 31,185,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FI.SA3	Public infrastructure development	Table 2-3
(2) Government organisation:	02	MAR-SC	Directorate of State Coordination and Special Projects	Table 2-6
	06	MAR-FA	Directorate of Fisheries and Aquaculture Development	Table 2-6
(3) Activity types:	209	SP-EI	Service delivery/infrastructure development - Economic infrastructure development	Table 2-12

1.3 Project characteristics: (to be selected from the items below)

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	
	82	NB	Northern Bahr el Ghazal State	
	83	WB	Western Bahr el Ghazal State	
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/15-2020/21, 5 years)	
	02	PH2	Phase II (2020/21-2025/26, 5 years)	
	03	PH3	Phase III (2025/26-2030/31, 5 years)	
	04	PH4	Phase IV (2030/31-2040/41, 10 years)	X
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	
	02	GBT	Greenbelt	
	03	HAM	Hills and Mountains	
	04	ISP	Ironstone Plateau	
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income		

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>The capture fisheries of South Sudan presently yield at least 140,000 tonnes¹⁶⁸, nearly all of which is consumed locally. Much of this fish, more than half, is processed by drying or smoking. Dry fish is less valuable than fresh fish in the market place, worth about half as much¹⁶⁹ on an equivalent fresh fish basis.</p> <p>Prior to 2012 up to 16,000 tonnes per year of fish on ice was exported down the Nile River to Khartoum by boat, and also north by road to Khartoum in refrigerated trucks using ice, where there is an almost inexhaustible demand for fish. The fish came from the Sobat river, Eastern Bahr el Ghazal river and the Nile Sobat Rivers Livelihood Zone as far south as Bor. This is in addition to the fish consumed in the country.</p> <p>The catch can probably rise by another 60,000 to 70,000 tonnes before the (maximum sustainable yield) MSY is reached, and it would be reasonable to aim to achieve a MSY of around 200,000 tonnes per year.</p> <p>To achieve economic growth in the capture sector there will be three thrusts of development:</p> <ul style="list-style-type: none"> • To process more of the catch fresh, (as opposed to drying the catch) to achieve higher prices as well as taking advantage of value adding opportunities for local, regional, and international luxury markets • To increase the catch to the MSY and sustain it at that level (avoiding overfishing through proper management of the wild resources) • To increase the value of the catch through reducing post-harvest losses <p>Fish landing sites in strategic areas will assist in all three areas of economic growth, by allowing</p> <ul style="list-style-type: none"> • Centralising of landing, allowing traders with boats and vehicles to visit one central landing site instead of several • Improving fish quality and handling by speeding activities • Providing focal areas for data collection, credit camps, training activities and co-management activities • A central point for ice sales, so that the catch can be kept fresh • A central point for land based traders to base their activities • Providing clean areas for landing and display of fish • Supporting communities through other development activities • Improving transport links up and down the rivers • Allowing ice and ice boxes to be collected at a central location, obviating the need to produce dried or smoked fish • Providing covered space for engine repair, boat repair and gear repair. <p>The market currently is for whole fish, gutted and/or ungutted, head on; or smoked/dried (done in the villages). It is not anticipated that any fish processing will take place at the landing sites.</p> <p>Some staff training will be included in the project to ensure proper management of the landing sites after handover.</p>
(2) Objectives:	<p>The objective of the project is to increase the value of capture fisheries in South Sudan, through increasing production and increasing the value of the catch.</p> <p>The short term objective is to build 9 fish landing sites in the Nile-Sobat Rivers Livelihood Zone.</p>
(3) Overall description including temporal and spatial extent of project:	<p>The project seeks to establish 9 simple fish landing sites, each with a small jetty or quay suitable to the location.</p> <p>The exact location of each site will be decided after consultation with stakeholders, including communities, producer organisations, beach landing committees (or equivalent), women's and other local groups, the counties, payams and bomas and the state government. The selection criteria for sites will have to recognise the practicalities of the local topography, hydrography and politics.</p> <p>Although designs will vary slightly between locations, the basic installation will be the</p>

¹⁶⁸ 2009, NBS consumption figures, analysed by CAMP 2013

¹⁶⁹ CAMP figures from market surveys in 2013

Items	Information
	<p>same at each site:</p> <ul style="list-style-type: none"> • A small quay, mole or jetty. This will not have vehicle access. If necessary a floating pontoon will be attached to the permanent structure so that rises and falls in the river are catered for. (Vehicles will be loaded and unloaded at the sorting area.) • Cement paths between buildings, hard-standings and stores. • A large flat sorting area with a roof and a sloping floor and covered drains, used for sorting fish and icing etc. No walls. Built high enough above ground level so as to stop vehicles from entering and parking within the structure. No wood in the structure. All steel to be coated. Water collection from roof. • A “market area”, which would be used for display of wholesale fresh fish in insulated boxes on ice, and dried fish. With a roof, drain and sloping floor. No walls. Built high enough above ground so as to stop vehicles from entering and parking within the structure. No wood in the structure. All steel coated. Water collection from roof. • Sanitary facilities for both workers and production requirements. Hand pumped water to header tank from a well or roof collection of rain water. Septic tanks and soak-aways • Lockable stores for fresh fish on ice (in insulated boxes) and for dried fish. The designs of these two types of stores are very different. • A meeting/training area, with a roof and low walls. Open sides (no windows). (“Lokuba” type roundhouse) • Small office above the stores <p>Ice will be delivered by truck or boat from ice producing plants in the larger towns. Should it be decided that ice must be produced on site then the private sector will have to be encouraged to make the necessary investment, but it is unlikely that this will occur in the near future. There is no need for an electricity supply. Water supply will be collected rainwater through a header tank, or from a well, with the pump powered by hand.</p> <p>Many of the centres are in areas of low security, so the less equipment installed the better.</p> <p>At each site 3 community workers and 2 state based officials will be trained in management of landing sites.</p> <p>Wood as a building material is to be avoided in all buildings and at all sites, (for technical reasons)</p> <p>The project proposes to put in place dedicated fish landing sites at or in the immediate vicinity of 9 priority areas:</p> <ul style="list-style-type: none"> • Central Malakal – Upper Nile State • Nassir – Upper Nile State • Tonga – Upper Nile State • New Fangak – Unity State • Rubkona – Unity State • Terekeka town – CES (slightly reduced specifications) • Bor - Jonglei • North Juba – Central Equatoria (as a receiving station for fresh and dried fish coming from Terekeka, Bor and points North) • Nimule – Eastern Equatoria (slightly reduced specifications) <p>Reserve sites: Akobo, Abwong, Badiet, Baliet, Mangala and Jekmeir. The reserve sites are to be used if any of the priority sites are unsuitable (probably due to land acquisition problems or security issues)</p> <p>Three fisheries extension centres were constructed in Terekeka-CES, Nyang-Lakes State and Liap/Adok-Unity State by the GIZ Fisheries Production and Marketing Project in 2009-12. Shambe already has a wharf and facilities, though fishers are excluded, as in Juba. In Terekeka the landing site to be provided is minimalist and in a different site to that constructed by the GIZ project. The GIZ centres are more of an extension centre than a landing site.</p> <p>The design period will be 3 years, during which individual designs based on simple concepts will be developed for each site. At each site land will have to be acquired for development and necessary permissions granted, and the local communities must also give their backing to the project. This period will overlap with the construction of facilities, if sufficient locations can be identified and all obstacles removed. Contracts for construction will be in groups of 3 sites.</p> <p>On handover the landing sites will be managed by the communities where they are established, or through producer organisations (Malakal, Bor, Juba)¹⁷⁰, staff having been</p>

¹⁷⁰ Management directly by the states without community involvement is to be avoided due to the tendency for corruption and misuse of both facilities and funds.

Items	Information
(4) Component structure:	<p>trained by the project. For each site an administrative committee that meets annually, and which contains representations of the states and other interested stakeholders, will be formed to oversee the management of the facilities and assets.</p> <p>Component 1: Pre-construction Component 2: Design and tendering</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1: Pre-construction (2 year). Establish necessary staffing to run the project. Confirm site selection for landing sites (based on technical rather than political criteria) and appoint suitable civil engineers for design and oversight.</p> <p>Activity 1.1: Appointment of part time TA adviser/project manager to the project to work with the project and MLFI. 40 man months over 8 years. Provided with vehicle for project use, and an office.</p> <p>Activity 1.2: Appointment of national technical manager to work with the project and MLFI – 8 years. (2 x 4 year renewable contracts)</p> <p>Activity 1.3: Appointment of state focal points for each state involved.</p> <p>Activity 1.4: Affirmation of political buy in at national and state level. Confirmation of site selection with local stakeholders, including producer organisations, beach landing committees (or equivalent), co-operatives, women's groups, and other local groups, though based mostly on technical rather than political or crude geographical criteria. Removal of any land issues. Obtain necessary permissions and permits. Commission Environmental Impact Assessments (EIAs)</p> <p>Activity 1.5: Restricted tender process to choose civil engineers for design and oversight.</p> <p>Activity 1.6: Appoint civil engineers to produce detailed plans, bills of quantities and for oversight of construction</p> <p>Outputs: Contracts for TA and local services. Agreements between states, project and communities on sites for fish landing sites. EIAs for each site. Contract for design of the infrastructure</p> <p>Component 2: Design and tendering (begins one year after Component 1 starts) 2 years. Produce designs for all the proposed centres and appoint building firms to undertake the construction of the centres.</p> <p>Activity 2.1: Design of the various centres. One basic design but with individual permutations depending on sites (agreed with project manager and local communities)</p> <p>Activity 2.2: Tender process for construction phase (3 sites)</p> <p>Activity 2.3: Award of tender (3 sites)</p> <p>Activity 2.4: Repeat process in Activity 2.1, Activity 2.2 and Activity 2.3 twice more, until all 9 landing sites are designed and tenders awarded</p> <p>Outputs: Designs and bill of quantities (x 9). 3 construction contracts</p> <p>Component 3: Construction and handover (begins one year after Component 2 starts). To build the fisheries landing sites to the appropriate designs and specifications. To hand over the fisheries landing sites to the designated managers and to ensure good management of the sites through training the future managers</p> <p>Activity 3.1: Build the fisheries landing sites.</p> <p>Activity 3.2: Oversight of construction process</p> <p>Activity 3.3: Provide basic equipment such as furniture, desk and chairs, for the office.</p> <p>Activity 3.4: Three community staff and two states' staff trained in management of fish landing sites at each site (business management, asset management, accounts, fish handling, hygiene principles, HACCP¹⁷¹ etc) by staff of Padak Fisheries Training Centre in outreach courses.</p> <p>Activity 3.5: Handover of landing site facilities to local communities or produce organisations, through the states administration. Landing site administrative committee meets annually, and contains representatives of the states, communities, county, chiefs and tribal leaders, and other interested stakeholders.</p> <p>Outputs: 9 fish landing sites built and handed over. 45 community staff and state officials trained in management of fish landing sites (business management, accounts, fish handling, hygiene principles, HACCP, maintenance, etc)</p>
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2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<ul style="list-style-type: none"> • Consulting engineers • Building contractors • Padak FTC • Providers of building materials • Labour for construction.
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¹⁷¹ HACCP. Hazard and Critical Control Point.

Items	Information										
(2) Description of beneficiaries within the framework of the project:	<ul style="list-style-type: none"> • Fisheries communities at 9 landing sites • States' administration and training organisations • Fish traders and exporters • Fish consumers in South Sudan, Khartoum and elsewhere 										
2.4 Outcomes, impact and contributions to value added (i.e. economic growth)											
(1) Outcomes and impact:	<p>It is expected that the landing sites will contribute to:</p> <ul style="list-style-type: none"> • Increased fish production through improving markets • Increased fish exports, though increasing the amount of exportable fish being produced • Higher value fish being produced by reducing the time the fish spends in the value chain, and the application of the use of ice • Increased income for fishers and fishing communities. • better data collection on fish and fisheries • improved co-management of resources. • better certification of the fish produced improving traceability 										
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)										
2.5 Environmental and social impact, and mitigation measures											
(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%; padding: 5px;">Negative: b</td> <td style="padding: 5px;">Project:</td> </tr> <tr> <td style="padding: 5px;">Positive: b</td> <td style="padding: 5px;">a: is likely to have minimal or little impact on the environment and/or society</td> </tr> <tr> <td></td> <td style="padding: 5px;">b: may have an impact on the environment and/or society</td> </tr> <tr> <td></td> <td style="padding: 5px;">c: is likely to have a significant impact on the environment and/or society</td> </tr> <tr> <td></td> <td style="padding: 5px;">d: will have a significant impact on the environment and/or society</td> </tr> </table>	Negative: b	Project:	Positive: b	a: is likely to have minimal or little impact on the environment and/or society		b: may have an impact on the environment and/or society		c: is likely to have a significant impact on the environment and/or society		d: will have a significant impact on the environment and/or society
Negative: b	Project:										
Positive: b	a: is likely to have minimal or little impact on the environment and/or society										
	b: may have an impact on the environment and/or society										
	c: is likely to have a significant impact on the environment and/or society										
	d: will have a significant impact on the environment and/or society										
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • The actual construction of the buildings will have little impact on the surrounding area. The buildings are modest, there will be no processing done at the site and the buildings are not intended for use as accommodation. Toilets, drains and washing facilities will discharge into septic tanks and soak ways, minimising pollution. • Any increase in fishing activity should not lead to overfishing because the states will have implemented a co-management system of controlling overfishing of the fish stocks. • Organic waste should be minimal and if necessary can be composted in open pits. Dry inorganic waste will be collected in bins and disposed of by the municipality if this option exists. Where there is no municipal waste collection dry inorganic waste will be buried near the site or burned. Garbage management will be based on the premise that there will be no toxic wastes, so no leaching of toxic substances. <p>(Positive)</p> <ul style="list-style-type: none"> • At the site itself there will be some increase in employment, but this will be limited to a few labourers, who will move in from the surrounding area to become porters, cleaners etc. • The landing sites are gender neutral in that they will not interfere, either positively or negatively, with established roles in society where they are situated. 										
2.6 Monitoring and evaluation for impact measurement											
(1) Measurable indicators and situation at a starting point:	<p>Indicators: Numbers of fish landing stations. Fish production Situation: 3 "Extension centres" built by GIZ project (Adok, Nyal and Terekeka). Catch approx. 140,000 tonnes per year. No exports of fresh fish in 2014 (up to 2012 exports to Khartoum of 16,000 tonnes per year)</p>										
(2) Measurable indicators and situation at the end point:	<p>Indicators: Numbers of fish landing stations. Fish production. Fish exports. Situation: 12, 3 built by GIZ and 9 built by project. Fish production rises to 200,000 tonnes per year by 2025. Exports to Khartoum rise to 16,000 tonnes per year, possibly much more.</p>										
(3) Methods of measurement and sources of information:	<p>Project reports. Landing site construction progress. MFLI annual reports. Landing sites and fish production and exports States' fisheries reports. Landing site establishment. Fish production in the state.</p>										
(4) Responsible parties for the monitoring and evaluation:	<p>Project and CAMP/IDMP Implementation Coordination Task Team MLFI States administrations National Bureau of Standards and/or Competent Authority – export figures from certification scheme Customs – export figures</p>										
2.7 Required human resources											
(1) Principle of human resources management:	Private sector and/or communities										
(2) Required human resources in the public sector (Positions, grades and numbers):	<p>None. Management of the landing sites will be through the local communities through an administrative committee that meets annually, and which contains representations of the states and other interested stakeholders. CAMP/IDMP Implementation Coordination Task Team – oversight of project. Routine function</p>										
(3) Required human resources in	1 international TA. Project manager. Civil engineer. 40 months over the project. Qualified										

Items	Information
the private sector including consultants (positions, qualification and numbers):	civil engineer with 15 years experience in Africa. Regionally based. 1 national technical manager to work in MLFI for 7 years. Experience in civil engineering in South Sudan. Diploma or technical qualification in civil engineering. Driver and accounts clerk – 8 years

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	H L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	<ul style="list-style-type: none"> • Land issues: For this reason alternative sites are suggested so that if land issues at one site cannot be resolved then there is an alternative • Security: Some of the areas where sites are proposed have security problems. For this reason minimal equipment is provided, so the centres do not become a target for robbery. • Flooding: Some of the areas where sites are proposed are prone to flooding in the wet season. For this reason the buildings' suggested design is robust, in that it does not matter if they flood temporally, and the design of the buildings is raised above ground level. • River topography changes: Rivers are constantly changing course and there is a real danger that the sites might become marooned in the middle of the river, or left high and dry, by movements in the rivers path¹⁷². • Climate change: By the time the project starts, or afterwards, climate change may alter the hydrology of the Sudd and the Nile-Sobat Rivers Livelihood Zone. These effects cannot be predicted. • Buy in by communities: Some communities or politicians may not buy in to the construction of landing sites in their areas. Once again for this reason alternative sites are proposed. • Misuse of the sites: The administrations in the states are not known for their probity, and there is a danger that the sites may be requisitioned by single entities, or taken over and used for other purposes: ultimately their benefits being denied to the fishing communities. It is to be hoped that this can be avoided by involving the communities in the landing sites' management.

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	The simplicity of the design of the landing sites means that recurrent costs should be kept to a minimum. Retailing of smoked and dried fish is typically women's work in South Sudan, and men retail fresh fish and do wholesaling and transport of dried and smoked fish. This project is unlikely to affect these roles.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>The fishing landing sties will be managed by the communities in which they are located (or by producer organisations), though nominally owned by the states. It is not intended that the landing sites should become cash cows for corrupt officials from the states, through informal taxation, and for this reason the states are to be excluded from day to day management of the landing sites, except as members of the administrative committee.</p> <p>A detailed plan of operations should be prepared by Padak FTC during the planning stages and used to establish clearly the training to be undertaken for the staff who are to manage these fish landing sites. This plan should also establish detailed procedures for the systematic handling, and distribution of landings, method of payment of any dues, issue of receipts, weighing system, daily sales and marketing expenses recording system, and the preparation of monthly financial reports.</p>
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¹⁷² This is much more common than might be imagined

5.4.12 Private sector promotion of value adding for local and export markets

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Fisheries		
(2) Project name:	Private sector promotion of value adding for local and export markets		
(3) Project ID:	0 4 . 1 4 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2020/21	Ending FY: 2039/40	Duration (years): 20
(5) Total investment:	SSP 0	USD 0	Note: Not including recurrent cost
(6) Private sector co-finance	SSP (not estimated)	USD (not estimated)	

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FI.SA4	Private sector projects and businesses	Table 2-3
(2) Government organisation:	06	MAR-FA	Directorate of Fisheries and Aquaculture Development	Table 2-6
(3) Activity types:	302	PS-MF	Private sector - Manufacturing	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	X
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	X
(5) Planning time horizon (start):	01	PH1	Phase I (2015/15-2020/21, 5 years)	
	02	PH2	Phase II (2020/21-2025/26, 5 years)	X
	03	PH3	Phase III (2025/26-2030/31, 5 years)	
	04	PH4	Phase IV (2030/31-2040/41, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	
	04	ISP	Ironstone Plateau	
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	X
(8) Funding sources:	11	NBF	National government budget/development fund	
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	X
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>As South Sudan develops and the economy improves there will be an increasing demand for value added products in the fisheries sector.</p> <p>Fish has a backward bending demand curve, meaning that as incomes go up, initially there is an increase in demand for fish (to supply nutritional needs) and once this is satisfied the consumers tend to eat less fish protein and more protein from other sources (chicken, beef etc). Only when they become comfortable with their higher economic status do consumers increase their demand for fish again, and this time they begin to buy more value added convenience and luxury products. Demand for value added fish products also increases due to urbanisation, provision of utilities, conversion to a cash economy and the cosmopolitan nature of capital cities such as Juba, bringing in rich urbanites from overseas.</p> <p>Currently the demand generally for fish is unsatisfied, particularly fresh fish. The majority (55%) of the fish produced and eaten in South Sudan is smoked or sun dried. The country currently consumes about 17kg per cap per year (fresh fish equivalent). It is unlikely that the total demand for fish will decline, due to:</p> <ul style="list-style-type: none"> • the increasing population and • continued low incomes and poverty for the majority of South Sudanese, particularly in the urban areas, where incomes are only slowly increasing The effect of the backward bending demand curve will be very muted. • a rich elite in the urban areas, who demand processed convenience fish products <p>The example of Uganda is pertinent, where fish demand increases year on year.</p> <p>There is a burgeoning middle class and as its numbers rise they will demand value added products such as fillets, steaks, breaded fish sticks and other more esoteric products. These are already in supermarkets in Juba but they are all imported; mainly from Kenya and Uganda, but also individually quick frozen (IQF) tilapia fillets from China and pangasius (sometimes called “bassa”) IQF fillets from Vietnam. More arcane products for the restaurant and hotel trade are also available in Juba. The CAMP Situation Analysis gives details and prices of these in the Annexes.</p> <p>It is appropriate therefore that the private sector should begin to process locally produced fish from capture fisheries, and eventually large scale commercial aquaculture enterprises, to satisfy the local demand for value added products, replacing the imported products and keeping the value in country.</p> <p>Exports of fish are a long term aim of South Sudan. The main targets for South Sudan fish will be regionally to large towns such as Khartoum, to the Middle East and ultimately to Europe. At the moment the major potential importing nation for South Sudanese fish is Sudan; Khartoum has a very high unsatisfied demand for fish. Importing nations generally demand the highest quality fish, guaranteed to be free of pollutants and contaminants, and accompanied by certification. This does not currently apply to Sudan, who seem to accept any fish from South Sudan, but this might change.</p> <p>The private sector should however begin to process locally produced fish for export to other high value markets such as regionally and to Europe. Before this can happen</p> <ul style="list-style-type: none"> • a Competent Authority must be established, so that inspection and certification is sufficient to satisfy the importing nations, • quality control all along the cool chain is enhanced to maintain the fish in good condition. This requires the availability of ice, ice boxes, insulated transport and lots of training for everybody involved in fish handling down the cool chain, fishermen, traders, transporters and processing units. • establishment of large scale commercial aquaculture enterprises to produce tilapia commercially in large amounts since wild caught fisheries are unlikely to provide sufficient quantities to supply both domestic and export markets
(2) Objectives:	<p>The project is a private sector project with the aim of setting up sustainable and profitable fish value adding for local and export markets in South Sudan. The objective is to make profits for the investors.</p> <p>Incidentally the project will contribute to:</p> <ul style="list-style-type: none"> • Increased consumer demand for fish improving health, nutrition and convenience. • Efforts by food processors to improve their productivity and quality • Technological advances that enable producers to produce what consumers and processors desire • To improve variety of the product • To ensure food quality and safety of the final product

Items	Information
(3) Overall description including temporal and spatial extent of project:	<ul style="list-style-type: none"> • To improve nutrition • The fish processed will improve the variety of the product and ensure food quality and safety of the final product. • The market potential for value added products will meet customers' demand. • The processing of fish for a value added market increases economic activity and employment • Compliance will lead to better quality control at all stages <p>The project will be implemented completely by the private sector who will make all commercial and financial decisions.</p> <p>It is expected that the private sector will identify value adding in the fisheries sector as a potential investment fairly rapidly. Already the private sector is very active in transporting and retailing fresh and dried fish from the producing areas such as Terekeka and Bor in the Nile Sobat rivers livelihood zone to the main urban centre in Juba, and also transporting fresh tilapia and Nile perch from Uganda to Juba where it is sold retail in markets and wholesale to hotels. The private sector also moves large amounts of dried and smoked fish from producing areas near Lakes Victoria and Albert in Uganda to South Sudan, some of which is re-exported to Sudan.</p> <p>The private sector has already established a limited capacity to retail iced fresh fish and process fresh fish into fillets and steaks, as requested by the consumers. There are some hygiene concerns in the current premises. As time passes these facilities will be expanded by the private sector, and stores, hotels and restaurants will be customers for filleted fish, fresh and frozen. A vibrant fish and chip trade from fast food outlets is to be expected to develop as it has in other neighbouring countries. This level of value adding is likely to be well established within 5 years (2020). The fish processing establishments will still be mainly retail and wholesale stores and shops, rather than "processing factories".</p> <p>By 2020 it is anticipated that the private sector will try to produce other products for which there is a demand. Vacuum packed frozen skin off fillets and round steaks would be suitable product areas for development. Fish fingers and other breaded products would also naturally be part of the array of value added products that could be produced, as has happened in Uganda.</p> <p>Factories will be established in the Juba area, as there is some continuity of utility supply, ice is available, and the market is there. Juba is where the main demand is and to where fresh fish is currently delivered in quantity.</p> <p>As the wealth and economic prosperity of the nation improves there may be opportunities to establish processing facilities in other major towns, particularly those near supplies of fish, such as Malakal, Bor and near to large scale commercial aquaculture producing centres, such as Yei and Yambio.</p> <p>It is envisaged that 16 processing units will be set up countrywide by 2040</p>
(4) Component structure:	<p>Component 1: Land and buildings Component 2: Fish production Component 3: Capital Component 4: Labour force Component 5: Chilled transport Component 6: Equipment Component 7: Compliance</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Land and buildings. The private sector will have to obtain land on which to site any processing units. Up to now the private sector has proved to be very adept at finding land for investment purposes for manufacturing, ice machines etc, and no doubt will for this.</p> <p>Activity 1.1: Land generally is difficult to obtain tenure on, but provided the correct incentives are paid this is not an insurmountable problem. Onto this land a suitable industrial style building will have to be installed with utilities and drainage and sewage system, and a small office on the same site.</p> <p>Outputs: Land acquisition for processing facilities and buildings</p> <p>Component 2: Fish production. The owner of any processing facility has to have a regular supply of fish coming to the unit daily. Currently this is difficult to arrange, except for fish imported from Uganda, since the road system in South Sudan is poor, there are security problems with river transport, and communications generally are very bad. With time all these 3 problems will be alleviated, and should not present such a barrier to investment as they do now. The introduction of the mobile phone for communications between producers and traders has improved the situation already.</p>
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Items	Information
	<p>Activity 2.1: Systems developed to guarantee continuity of supply Outputs: Production systems to guarantee supply of raw material</p> <p>Component 3: Capital. Finance is available from commercial banks and credit facilities; and also from direct inward investment, mostly by the diaspora. Activity 3.1: Arrange finance for investment Outputs: Capital for investment</p> <p>Component 4: Labour force. There is a severe shortage of trained labour in South Sudan, in all sectors, not just fisheries. It is hoped that by 2022 the newly re-constructed Fisheries Training Centre (CAMP project) will be capable of providing national vocational qualifications (NVQs) in fish processing for the industry. Under regulations to be elaborated during the CAMP Fisheries and aquaculture law project., a set of regulations on staffing qualifications for fish processing establishments will have been implemented. The Competent Authority, to be established under the National Bureau of Standards, will also set standards that will have to be maintained. Additionally the aquaculture industry will be supported by the National Aquaculture and Research Centre to be established in the Greenbelt, which will also offer NVQs in aquaculture related subjects. Activity 4.1: Labour trained to requirements of HACCP¹⁷³ and Competent Authority Output: Trained labour force for efficient production of value added fisheries products; and to comply with regulations</p> <p>Component 5: Chilled transport. The private sector will either rely on other private fish collectors, sub-contract collection of fish and delivery to its premises, or attempt to set up a collection service. In all three cases there is a need for insulated trucks, insulated fish boxes and a regular and ample supply of ice. Ice is already available in Juba and the private sector is likely to install more ice machines in rural population centres as demand increases. Vehicles and insulated boxes will have to be imported, the vehicles second hand from Japan as used in Uganda, and the insulated boxes from China or Thailand. Activity 5.1: Transport vehicles sourced and funded from commercial banks or other financial institutions. Output: Vehicles to move fish from landing sites to production facilities in good condition and to air services or frozen in containers.</p> <p>Component 6: Equipment. Basic equipment is needed for filleting and processing fish and each processing plant will eventually require a chill store and ice making facility As the unit moves to more sophisticated frozen value added products, a blast freezer and cold store, and mechanical processing lines for coatings and frying will also be required. Suitable packaging solutions will also have to be found. Water supply must also be up to WHO standards for drinking. Activity 6.1: Ice machines, equipment and water purification plant sourced and funded from commercial banks or other financial institutions. Output: All equipment needed to produce value added products in a hygienic and wholesome manner</p> <p>Component 7: Compliance. In South Sudan there is no fisheries law nor regulations, and the public health legislation and enforcement is weak. This will change with the enactment of the Fisheries Law and the coming into force of the associated regulations. It is expected that municipal and national food and hygiene law will also rapidly improve, and the application of HACCP to all food production premises is to be supposed. Additionally with the establishment of a Competent Authority in 2022/3 there will be regular inspection of all fish processing plants and enforcement of regulations. Activity 7.1: All processing plant will abide by all relevant regulations. Output: Necessary systems to operate within municipal, national standards and fisheries regulations. To cover water supply, HACCP, storage, factory processes and general hygiene.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:

- The service providers will be:
- Equipment suppliers
 - Utilities
 - Transport providers, local and for export
 - Banks and credit institutions
 - Training institutions
 - Municipalities (hygiene etc)

¹⁷³ Hazard and Critical Control Point; a system of quality control.

Items	Information
(2) Description of beneficiaries within the framework of the project:	<ul style="list-style-type: none"> • The Fisheries Training Centre (when refurbished) • The Competent Authority (when created) Factory owners and investors Fish consumers in South Sudan and abroad Fishermen (suppliers of raw material) Transport providers, local, and to international markets Supermarkets and fish retail outlets Fish farmers - outlet for production

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	The major impacts will be: <ul style="list-style-type: none"> • Improved food security through better marketing • Improved incomes for businesses generating more profit. • Reducing post-harvest losses through better processing. • Increased fish production and incomes in rural areas • Import substitution • Improved employment in urban areas
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: b</td> <td rowspan="2">Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society</td> </tr> <tr> <td>Positive: b</td> </tr> </table>	Negative: b	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society	Positive: b
Negative: b	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society			
Positive: b				
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • There is a danger that localised overfishing can occur, because there is going to be high competition in the fishing ground to supply the processors. This will be mitigated by co-management of the resources with the resource users and enforcement of rules and regulations designed to protect fish stocks. • Effluent from the factories will be disposed of in the manner approved by the municipal authorities. There is a danger that rules will not be enforced due to bribes given to officials. • In the case of a large factory in a peri-urban situation then there may be some land clearance, and loss of trees and vegetation. • Solid wastes will have to be disposed in landfill, though if the industry expands sufficiently then fishmeal may be an alternative. • HIV may be a problem in fish factories but will be mitigated by another CAMP project and national HIV awareness programmes. • All factories will have to be inspected by the Competent Authority so Codex standards will be enforced (once all necessary legislation is in place). <p>(Positive)</p> <ul style="list-style-type: none"> • The project will train staff in the fish processors, and in the landing sites. The project will increase the supply of fish and encourage the fishermen to catch more fish, thus improving incomes and employment to the people of South Sudan. • Fish factories usually employ mostly women as they are perceived to be more dextrous than men. 			

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • There is no such processing unit operating in South Sudan. • The indicator is the number of fish processors established in the country • No exports from South Sudan. (There were until 2012 to Sudan) • The indicator is the number of tonnes of fish exported
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • It is hoped that at least 16 fish processing units will be established in South Sudan by 2026 • The indicator is the number of fish processors established in the country • Annually 35,000 tonnes of export from aquaculture, 30,000 tonnes of export from wild capture (to Sudan and Middle East mostly) • The indicator is the number of tonnes exported
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> • Private sector monthly reports. • MLFI annual reports • Competent Authority records • CES fisheries Department monthly and annual report • Head of fish processors association (if any) monthly report. • Ministry of Finance tax and revenue data.
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> • Private sector managers • MLFI • Ministry of Trade and Commerce

2.7 Required human resources

Items	Information
(1) Principle of human resources management:	Private Sector
(2) Required human resources in the public sector (Positions, grades and numbers):	None. No public sector workers will be employed directly. Public sector will only be involved in the enforcement of quality control, labour regulations, taxation and hygiene. All routine activities of the public sector workforce.
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	Staffing levels will be decided by the individual fish processing factory managers, though there may be regulatory requirements that demand a certain level of staffing for some functions of production.

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	L L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	<ul style="list-style-type: none"> • Over fishing which might lead to the low production of fish from the Nile River especially locally in the Sudd region. If there is no consistent production the equipment will not be used to capacity. • Seasonality of fishing disrupting regular supply of raw material • Cattle raiding and other disturbances in the producing areas reducing supply • Land problems meaning there are no suitable sites available • Finance not being available to the private sector for this activity. • Quality control being too lax leading to a bad reputation for locally produced fish • Corruption and informal taxation affecting profitability • Inability to find appropriately trained staff • Inability to find finance for equipment.

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	<p>The importance of this project is to increase the value of locally produced fish by adding value to the raw material, through improved fish handling, reduced post-harvest losses and appropriate fish processing.</p> <p>Fish processing plant tend to employ mostly women, so the establishment of fish processing plants should increase employment opportunities for women in urban and peri-urban areas. Women are perceived to have more nimble hands for delicate tasks such as filleting and trimming.</p>
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>The private sector is responsible for all routine activities.</p> <p>Human resource requirements depend on the size of the facilities.</p>
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Part 3: Project cost estimation

(no cost estimated)

5.4.13 South Sudan national fisheries competent authority project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Fisheries		
(2) Project name:	South Sudan national fisheries competent authority project		
(3) Project ID:	0 4 . 1 5 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2024/25	Ending FY: 2027/28	Duration (years): 4
(5) Total investment:	SSP 13,778,000	USD 3,444,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FI.SA2	Public sector institution and management capacity development	Table 2-3
(2) Government organisation:	04	MAR-IM	Directorate of Investment, Marketing and Supplies	Table 2-6
	06	MAR-FA	Directorate of Fisheries and Aquaculture Development	Table 2-6
(3) Activity types:	102	ID-AD	Institutional Development – Administrative capacity development	Table 2-12
	207	SP-PL	Service Delivery / Infrastructure development. Granting permissions and licenses	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	X
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	X
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/15-2020/21, 5 years)	
	02	PH2	Phase II (2020/21-2025/26, 5 years)	X
	03	PH3	Phase III (2025/26-2030/31, 5 years)	
	04	PH4	Phase IV (2030/31-2040/41, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>The Competent Authority (CA) is the official authority or authorities charged by the government with the control of food hygiene as well as/or with sanitation in aquaculture. For the purpose of this project it is the body responsible for health control of fishery products for human consumption. This is currently the National Bureau of Standards in South Sudan which is legitimised under the National Bureau of Standards Bill which enables South Sudan to monitor and control the quality of imported goods and services and also internally produced goods</p> <p>Fish production from capture fisheries in South Sudan is likely to increase from the present 140,000 tonnes to more than 200,000 tonnes within the next 10 years. This is somewhat similar to the Maximum Sustainable Yield, (which is as yet un-quantified). Fish culture is also likely to expand, up to possibly 70,000 tonnes per year by 2040, with production centred in the Green Belt, but also in dams, irrigation schemes, and in areas of the Nile Sobat in cages. Much of this fish will go to satisfy local demand but it is anticipated that a significant amount of export will begin, starting with gutted and gilled but otherwise whole fish to regional markets, particularly Khartoum in Sudan, and then developing further to satisfy the lucrative markets of the Middle East and Europe.</p> <p>Currently there is only some inspection of fish that is imported from Uganda. This is somewhat haphazard, subject to informal incentives and taxation, and carried out by inspectors from the National Bureau of Standards.</p> <p>For exports, particularly if exports to the EU are considered, fishery and aquaculture products intended for human consumption must comply with general health requirements related to:</p> <ul style="list-style-type: none"> • Country Health Approval • Approved establishments • Health certification • Health control. <p>Hence, these products can only be imported into the European Union (EU), if they come from an approved establishment of a third country included in a positive list of eligible countries for the relevant product, are accompanied by the proper health certificates, and have successfully passed the mandatory control at the border inspection post (BIP) in Europe.</p> <p>The problems that the project is designed to overcome are:</p> <ul style="list-style-type: none"> • Directorate of Fisheries and Aquaculture Development and the National Bureau of Standards (NBS) Ministry of Health which is responsible for food safety and hygiene are not coordinated • There is no National Codex derived from the Codex Alimentarius Commission (CAC). • Neither the inspectors of NBS nor MLFI can perform their duties properly • There are no Standard Operating Procedures or Codes Of Practice • A suitable laboratory for organoleptic, heavy metal and pesticide analysis for fish is not available • There are insufficient trained technicians in the NBS and none at all in DoFAD to staff any Competent Authority laboratory • The Fisheries Act and accompanying regulations have not yet been upgraded to meet the present requirements of the fish industry. The regulations of the National Bureau of Standards Bill are similarly in need of modification to cover fisheries inspection • States fisheries officers have no instructions nor SOPs regarding hygiene and handling of fish at landing sites or during their routine duties and inspections • Fish is generally not hygienically handled throughout the value chain within South Sudan
(2) Objectives:	<ul style="list-style-type: none"> • To lower health risks for local, regional and international consumers by ensuring a continuous chill chain from capture to the final consumer and through industrial Good Manufacturing Practises (GMP) enforced by a strict quality assurance regime by the CA. • To increase the value of fish products produced in South Sudan for local sale and for export
(3) Overall description including temporal and spatial extent of project:	<p>The project seeks to strengthen the competent authority which has the responsibility for fish quality assurance in South Sudan</p> <p>A Competent Authority is merely the organisation responsible. This is currently, and will remain, for fish quality assurance and for export certification and import control, the</p>

Items	Information
(4) Component structure:	<p>National Bureau of Standards. Its staff and equipment need to be bought up to international standards, and supported by institutional reform and capacity strengthening, as well as being provided with the wherewithal to carry out its statutory functions.</p> <p>Over a period of 4years the project will:</p> <ul style="list-style-type: none"> • Identify staff and laboratory technician requirements to ensure the CA can undertake fisheries QA. • Review and draft legislation in respect to international hygiene requirements, empowerment and organisation of inspection systems, sanctions and right to appeal, amongst others. This will probably be in the form of a regulation. • Development of inspection manual, inspection forms, checklists and procedures • Training of inspectors at Padak FTC • Training of industry in basic HACCP¹⁷⁴ courses at Padak FTC. • Establishment of two Fish Quality Control Laboratories. Includes construction, equipment and utilities. 1) Central Fish Quality Control Laboratory in Juba. (Covers exports south by road and by air to the North and Middle East. Also covers imports from Uganda). 2) Satellite Fish Quality Control Laboratory in Malakal (covers trade to the North and East) <p>The project aims that the two laboratories will cover, inter alia, the following testing capacity: microbiological, chemical (histamine, heavy metals, pesticides, veterinary drugs, poly aromatic hydrocarbons, sulphites, total volatile base nitrogen (TVBN) sensory analysis, parasites. However, which of the specified testing methods, if all, will be in fact acquired by the project, and which in each lab, will be decided as the project proceeds. Some of the necessary equipment is very expensive and it is better to send samples overseas for testing.</p> <ul style="list-style-type: none"> • Specification and procurement of laboratory equipment for the laboratories in Juba and Malakal • Training of laboratory personnel in the different analytical methodologies • Preparation of the laboratories for accreditation (ISO 17025)
	<p>Component 1: Project establishment Component 2: Inspection training programme Component 3: Laboratory set up and training</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Project establishment</p> <p>Activity 1.1: Recruitment of International TA to assist with all tasks. 1 TA project manager 24 months over 4 years), and specialist short term TA for specific tasks within the project (48 months of TA over the 4 years). Two vehicles to come with the TA for their activities.</p> <p>Activity 1.2: An audit and review of the Fish Quality Control inspection system required for South Sudan. Identifies priorities. Identify priority needs for inspection.</p> <p>Activity 1.3: Preparation of an inspection manual, inspection forms and/or checklists, procedures and drafted regulations.</p> <p>Activity 1.4: Preparation of codes of practice and compliance guidelines. The industry and CA will require assistance in interpretation of Codex requirements, and in determining how these are best applied within the particular circumstances of the South Sudan. Generic codes of practice will be prepared for the Competent Authority, which explains the main requirements, <i>inter alia</i> for:</p> <ul style="list-style-type: none"> Design, layout, and construction of landing sites and establishments Design of water supply systems; Environmental pre-conditions Water quality parameters and monitoring Pest control and sanitation schedules Staff personal hygiene and conduct; training requirements Provision of quality assurance staff and facilities Control of specific hazards Ensuring traceability <p>A specific inspection system for landing sites, artisanal fishing vessels, ice plants and vehicles supplying raw materials for processing establishments</p> <p>Activity 1.5: Design of a residue monitoring programme (RMP) for aquaculture to include:</p> <ul style="list-style-type: none"> On the job training in RMP implementation Nomination of official laboratories for sampling and testing (may be in country or outside) Preparation of annual residue report Design of a mechanism for plan review <p>Activity 1.6: Identification of regional options for some testing (eg: heavy metals).</p>
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¹⁷⁴ Hazard and Critical Control Point. A proactive fish quality system.

Items	Information
	<p>Activity 1.7: Review of the proposed inspection system in order to Develop a sustainable inspection system based on cost-recovery, although maintaining the Government annual budget to cover salaries and basic operational activities. Introduce anti-corruption measures. Prepare a training program for the inspectors and industry; Prepare a one week study tour in a selected regional country (Uganda, Egypt) for 7 key inspectors and CA managers. This would include visits and technical meetings with: 1) Competent Authority and Inspection Agency, 2) Official testing laboratories (microbiological and chemical), 3) Landing sites and auctions places and 4) Fish processing establishments</p> <p>Activity 1.8: Identification of locations in Juba and Malakal for laboratories, resolution of all land issues and affirmation by affected institutions and administrations</p> <p>Activity 1.9: Identification of local civil engineers for restricted tender for design of the laboratory buildings</p> <p>Activity 1.10: Tender process for choice of civil consultants for design of the two laboratory buildings, preparation of the bills of quantities and for supervision of construction. Award of tender</p> <p>Activity 1.11: Tender process for construction of two laboratory buildings, and award of tender</p> <p>Activity 1.12: Construction of the two laboratory buildings, one in Malakal and one in Juba</p> <p>Activity 1.13: Handover of buildings to CA.</p> <p>Activity 1.14: Specification of lab equipment required for the laboratories at Malakal and Juba (by International TA)</p> <p>Activity 1.15: Restricted tender for lab equipment, delivery and installation, and award of tender</p> <p>Activity 1.16: Delivery of the lab equipment to Malakal and Juba</p> <p>Activity 1.17: Installation of lab equipment in Malakal and Juba.</p> <p>Activity 1.18: Local purchase of equipment for inspectors and delivery of equipment for Inspectors</p> <p>Activity 1.19: purchase two vehicles, one for Malakal and one for Juba when the laboratories are operational.</p> <p>Outputs: COPs, manuals and GMP guidelines, Designs, bill of quantities and tender documents for laboratories, Equipment lists for laboratories, Training programme</p> <p>Component 2: Inspection training programme</p> <p>Activity 2.1: Train fish inspectors of the CA in techniques of inspection in a comprehensive and practical way, based on the developed "Manual for inspection" and other materials produced by the project. Training will comprise 3 courses, each of one month, aimed at CA and States personnel using Padak FTC as a venue. 1 final course (5 days) with selected key personnel, including all the staff from the central office, will be held for calibrating interpretation of inspection activities amongst the different teams. The matters for training must comprise at least: Procedures of approval of vessels and/or boats, landing sites, means of transport and establishments Rules of a reporting system for assuring traceability including check-lists for the inspection visits Follow-up measures including possible sanctions, where necessary Rules for regular sampling including its packaging (covering documents) and preparation for transport Procedures for the establishment of environmental and/or residue monitoring for aquaculture Risk analysis, HACCP methodology application, HACCP systems verification and auditing Additionally, training will include a component on the basics of fish processing technology and associated hazards.</p> <p>Activity 2.2: Train QA managers of the processing industry in Good Manufacturing Practises (GMP) and internal Quality Assurance (HACCP); Train in value-added production and technologies to improve the preservation and quality of fish products during the production chain. This will include at least 3 (5 day) training courses to be held in Malakal, Bor and Juba.</p> <p>Activity 2.3: Train the Trainers – selected inspectors with training abilities, and staff from the Padak FTC and National Aquaculture Centre, to train fishermen and aquaculturalists on site with particular respect to basic hygiene (water, ice), handling of raw material (tables, ice boxes, boats, landing, harvesting, processing and auction sites), other necessary installations (light, fences, waste containers, etc.). The inspectors will be selected on their ability to pass on the information through a peer education scheme, not following a classroom system of training and trained to do so.</p>

Items	Information
	<p>Activity 2.4: Follow-up and evaluation of inspector's performance (one year later). Follow-up and auditing of selected processing establishments, auctions and landing sites. Follow up to reinforce the train the trainers for training fishermen.</p> <p>Activity 2.5: Undertake study tours as identified Outputs: Implementation of a series of training programmes for states, CA and private sector to enhance their skills</p> <p>Component 3: Laboratory set up and training (timing depends on building of the laboratories and the delivery and installation of equipment)</p> <p>Activity 3.1: After installation of lab equipment specified by the project, assess the knowledge and technical standards of the staff allocated to the laboratories at Malakal and Juba, and assist in structuring the laboratory towards Good Laboratory Practice and international accreditation;</p> <p>Activity 3.2: After assessment of the status of the laboratories, elaborate a training programme for the Quality Control Laboratory so that it can conform to international standards</p> <p>Activity 3.3: Train the technical personnel of the QCLs through on the job training, overseas attachments and formal training in overseas institutions on the use of the newly existing equipment. EU based training for CA staff. At least 2 people for 2 months. The training program should be carried out in close collaboration with the CA and enable the trainees to execute tasks according to the requirements of the national regulations, (which should be at least equivalent to the current EU legislation). Analytical methodologies that may be covered are: Regarding fish products and water: Microbiological, Sensorial analysis of fish quality, Parasites, Chemical analysis (histamine, heavy metals, pesticides, Total volatile base nitrogen (tvbn), Trimethylamine (tma), Sulphites, Veterinary drugs, Polycyclic aromatic hydrocarbons (pahs) and other environmental contaminates). Note that it maybe decided to undertake part of the testing routine out of the country due to its specialisation and cost of equipment. (Heavy metals, veterinary drugs, pesticides etc, but basic tests must be done in-country) An alternative testing centre overseas, or within SS, must be identified, so that if disputes or doubts arise there is recourse to independent testing facilities.</p> <p>Activity 3.4: Support and assistance for developing proficiency testing</p> <p>Activity 3.5: Support and assist the QCLs in the further preparation for the accreditation against ISO 17025 which specifies the general requirements for the competence of testing and calibration laboratories Outputs: Two fully functional laboratories established to ISO 17025</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<ul style="list-style-type: none"> • Contractors for design of laboratories • Contractors for construction of laboratories • Contractors for supply of laboratory equipment • TA consultants • Padak FTC
(2) Description of beneficiaries within the framework of the project:	<ul style="list-style-type: none"> • The beneficiaries of the project will be the Government of South Sudan in general and particularly the Competent Authority. • Inspectors, states officials and private sector who are trained. • Private sector companies, through application of HACCP and GMP • The ultimate beneficiaries will be the fishing community and the related industry in South Sudan as well as international and national consumers, through a maintained high quality output of wild caught and aquacultured aquatic products.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<p>Quality of fish offered for sale in South Sudan should increase due to the certification of landing sites, processing premises and transport methods. A sustained rise in the value of fish and fisheries products in South Sudan Ability to export regionally and to lucrative markets in the Middle East and Europe, increasing incomes to fishermen, traders and processors.</p>
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the	<p>Negative: a Positive: a</p>	<p>Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society</p>
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Items	Information
right):	c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	(Negative) • This is a quality testing and certification project. There will be minimal environmental or social impacts. (Positive) • The quality of fish that is presented to the public is expected to improve. • The quality of export fish is expected to be guaranteed by the testing system.

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • Income per kilo fish • Hygiene regulations, COPs, Inspection manuals, Laboratory manuals • Legal framework of regulations • Fish prices are governed by supply and demand and there is currently no monitoring at all. • The hygiene regulations for fish are not specified. • The legal basis for fish inspection and certification is not established.
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • Broad income per kilo fish should have increased. • Adequate legal and financial status of CA and inspection department. Should be broadly self-financing. • New hygiene regulations, COPs, Inspection manuals, Laboratory manuals introduced in legal framework and in procedures. • HACCP evaluations regularly performed by CA inspectors • Reference laboratories nominated for ISO 17025 • Quality assurance systems in place
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> • Project monitoring and evaluation will be based on periodic assessment of progress on delivery of specified project results and towards the achievement of project objectives. • Project reports • CA monthly reports • Export records (Ministry of Finance) • Export certification lists
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> • CA • MFLI • Ministry of Finance • Ministry of Trade and Industry

2.7 Required human resources

(1) Principle of human resources management:	Legislated function of Government
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> • 6 Competent Authority inspectors: New NBS staff • 8 Laboratory Technicians: New NBS staff • 20 States Inspectors (Part time). Do inspection work as part of their routine duties: Existing staff.
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Long term expert. 2 years over 4 year.</p> <ul style="list-style-type: none"> • 1 Expert in sanitary control in fishery products. A University degree in fisheries, veterinary science, food science, food technology, biology, chemistry or other relevant field with additional qualifications in sanitary control in fishery products, long term background in fish and fish products surveillance and particular experience in training of inspectors and a profound knowledge of international regulations relevant to control of fish and fish products sanitary status and fluency in English is required <p>Short term experts. 72 months over 4 years. As required.</p> <ul style="list-style-type: none"> • 2 Experts in Fish Quality Control Laboratories (to cover the different specialisation methodologies). A University degree in food chemistry and/or microbiology with specialisation of testing fish and fish products, proved by valid certification, Long term experience in organisation and execution of a national food and/or fish laboratory. English speaker • TA Expert Sanitary Control. Audit and review. Inspection manual. • TA Expert Sanitary Control. Training of Inspectors, industry and Train the Trainers. • TA Expert Sanitary Control. Follow up and evaluation • TA Expert Labs. Assessment of needs and establish training programme • TA Expert Labs. Reinforcement and training in validation. Manual and ISO 17025 • TA Expert Labs. Follow up and evaluation

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	L L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	<ul style="list-style-type: none"> • Land issues for the laboratories • Resistance to change from fish processors • HIV in the staff of the laboratories reducing their effectiveness • Corruption reducing effectiveness of inspection and QC

2.9 Other special considerations and/or notes

Items	Information
(1) Other special considerations and/or notes:	None
2.10 Routine operation and required resources after the completion of the project	
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner:	The CA is a routine (legislated) function of government CA should become partially self-financing, but will need support from government in the form of wages and some recurrent costs.

04.15 South Sudan national fisheries competent authority project (cont.)

Project duration	SSP/USD = 4												Total	% to total														
	Phase 1			Phase 2			Phase 3			Phase 4					SSP '000	USD '000												
Cost group	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	Total	% to	
5 Social assistance/donation (Emergency)																												
Total (SSP '000)										3,690	4,534	3,393	2,161														13,778	100%
Total (USD '000)										923	1,134	848	540														3,444	100%
% to total										27%	33%	25%	16%															

Public sector project
 Routine work by government
 Private sector project
 Routine work by private sector

5.4.14 Establishment of fisheries training and research institute project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Fisheries		
(2) Project name:	Establishment of fisheries training and research institute project		
(3) Project ID:	0 4 . 1 7 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2016/17	Ending FY: 2025/26	Duration (years): 10
(5) Total investment:	SSP 54,141,000	USD 13,535,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FI.SA2	Public sector institution and management capacity development	Table 2-3
(2) Government organisation:	06	MAR	Directorate of Fisheries and Aquaculture Dev	Table 2-6
	03	MAR	Directorate of Administration, Finance and HRD	Table 2-6
(3) Activity types:	203	SP-EX	Service delivery/infrastructure development. Extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	X
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	
	72	JG	Jonglei State	X
	73	UT	Unity State	
	81	WA	Warrap State	
	82	NB	Northern Bahr el Ghazal State	
	83	WB	Western Bahr el Ghazal State	
	84	LK	Lakes State	
	91	WE	Western Equatoria State	
	92	CE	Central Equatoria State	
	93	EE	Eastern Equatoria State	
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/15-2020/21, 5 years)	X
	02	PH2	Phase II (2020/21-2025/26, 5 years)	
	03	PH3	Phase III (2025/26-2030/31, 5 years)	
	04	PH4	Phase IV (2030/31-2040/41, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	
	04	ISP	Ironstone Plateau	
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	X

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

The Padak Fisheries Training Centre at Bor in Jonglei, now part of the John Garang Memorial University of Science and Technology (JG-MUST), was the only establishment in South Sudan providing non-graduate training in fisheries. Courses included a 6-9 month certificate, and various extension, processing and community management short courses. Training was provided on an ad-hoc basis due to lack of equipment and funding, and there were insufficient courses to satisfy the various needs of the national and state governments, DPs, NGOs and the private sector. Unfortunately the centre was damaged in the 2013/4 disturbances in South Sudan and the equipment and furniture wrecked, doors and windows broken. The last training conducted was in September 2013, a fisheries extension course targeted at 20 participants from Jonglei State.

This project seeks to re-establish the Padak Fisheries Training Centre, and to make it capable of satisfying the fisheries training needs of South Sudan for the foreseeable future. Capture fisheries in South Sudan is changing, the Padak FTC must also change in response to this, including the development of institutional capacity of the Padak Fisheries Training Centre. Additionally, with the commercialisation of the fishing industry, the time is rapidly approaching where skills development rather than an academic education will be needed to fully realise the potential of the sector.

The centre, being attached to the JG-MUST University in Bor and close to the Sudd, is a suitable place to establish basic research facilities covering aquatic sciences and capture fisheries in South Sudan. There are currently no facilities anywhere in the country to undertake this important and desperately needed work. Its location also makes it ideal as an international venue, since Bor is close to Juba which has an international airport, and there is a road between Juba and Bor, and regular internal flights.

The Padak FTC training facilities could also be hired out for training by non-fisheries actors, such as NGOs, regional bodies and state and national government administrations.

It is possible that the FTC could also provide certified training for skippers, mates and deckhands on river transport vessels to international standards in the future, though full details of this are not included in this project profile.

It is anticipated that the FTC would be completely privatised in 2035.

The problems that the project seeks to overcome are:

- Problem 1: Complete absence of training (partly due to recent disturbances) or research facilities for capture fisheries in South Sudan. These need to be established as soon as possible to cater for the training and research needs of the nation.
- Problem 2: Limited availability of appropriately qualified South Sudanese nationals to participate in the development of the fisheries sector. The projected rapid growth of the catching and processing sectors and its demand for appropriately qualified staff will lead to non-nationals being employed, particularly in the post-harvest sector, unless steps are taken to train local people. Additionally employment and development opportunities for women in the sector need to be addressed.
- Problem 3: Inadequate management, coordination and provision of appropriate training for the fisheries sector. So far Padak FTC has failed to meet its expected role as the core fisheries training centre for the whole of South Sudan. Padak needs to redefine its mission and develop a new institutional culture. Practical extension and vocational skills are what is going to be required in the future.
- Problem 4: No fisheries sector training needs analysis. A sectoral training needs analysis would assist the strategic planning process as well as provide a basis for new course development. Also without the introduction of an effective HRD plan and modern administration, the centre will fail to meet its potential.
- Problem 5: Future industry participation in Padak FTC training. As the industry develops and the private sector expands the industry should participate to ensure relevance of courses and to provide motivation and purpose for the staff of the Padak FTC
- Problem 6: Inadequate trainer skills. No training needs analysis has been undertaken but it is evident that the staff of the Padak FTC are inadequately grounded in many topics, particularly related to vocational skills and practical work.
- Problem 7: Inability to fund industry participation (initially). Donor funding within this project is sought to continue the vocational skills program until it becomes established whence it will become a full fee program.
- Problem 8: Inadequate facilities. Even before the recent troubles, the Padak FTC lacked

Items	Information
	<p>many facilities, a net loft, wet and dry rooms, appropriate canteens, ice machine and functioning chill store, boats and many other facilities and essential equipment.</p> <ul style="list-style-type: none"> • Problem 9: The Padak FTC Operational Plan is insufficiently robust and needs to be updated. The strategic vision and resultant long term operational plan is insufficient for changing circumstances. As a consequence staff and management have no firm direction or benchmarks. • Problem 10: Updating of the Asset Management Plan is important reflecting the increased asset level expected at the FTC. • Problem 11: Inadequate monitoring and control processes. Quality assurance measures are lacking with little evidence of satisfactory management review and control procedures. • Problem 12: Centralised control from MLFI/JG-MUST stifles initiative. The remote control inherent within the existing management structure of the national government and JG-MUST ensures there is no sense of ownership of neither the function nor organisation of the Padak FTC. As a consequence there is little sense of accountability nor any imperative to progress or grow the institution's capacity and output. • Problem13: The research needs of the fisheries of South Sudan are not being addressed.
(2) Objectives:	<p>The project is an institutional strengthening project with the long term objective of supporting the development of the capture fisheries of South Sudan so that the sector maximises its contributions to food security and economic growth.</p> <p>The immediate objective is to establish a fisheries training centre that is sufficiently equipped and staffed to satisfy the training and research needs of the capture fisheries sector of South Sudan.</p> <p>The FTC will contribute to:</p> <ul style="list-style-type: none"> • development of a vibrant private sector • employment creation • increased opportunities for rural production • improved delivery of rural services • movement towards the development of an industrial base • increased opportunities for South Sudanese citizens • improvement of management of fisheries resources in states • increased efficiency in states and national fisheries administrations • better understanding of the biology and dynamics of the fisheries of South Sudan
(3) Overall description including temporal and spatial extent of project:	<p>The project will build and commission the Padak Fisheries Training Centre at Bor, part of the John Garang Memorial University of Science and Technology</p> <p>Necessary buildings and other facilities will be constructed, and the FTC will be equipped with teaching equipment, boats, research facilities such as a wet and dry lab, accommodation for students and staff.</p> <p>The staff of Padak will be retrained and have their skills enhanced through a programme of overseas attachments and courses, in-country training and mentoring by an international TA who will assist with setting up the centre and its initial few years of delivering courses.</p> <p>Curricula will be developed for a variety of training courses and skills enhancement opportunities.</p> <p>The majority of the buildings will be complete after 4 years, and the majority of the skills enhancement for the staff will be complete after 7 years. However it takes time to develop skills and aptitude in training and institution management, so a further 3 years of limited TA assistance to the centre, and a similarly lengthened period of training for the staff are envisaged. This will give sufficient time after the training centre is running for the staff to get experience whilst still receiving management assistance and training.</p> <p>During set-up of the Padak FTC basic running costs will be provided, but in time the centre is expected to charge for all training done there, and finally become completely self-financing. It is envisaged that the centre could be privatised in 2035.</p>
(4) Component structure:	<p>Component 1: Pre-construction preparation Component 2: Design, build and equip the FTC Component 3: International Technical Assistance Component 4: Provide fellowships and attachments Component 5: Provide initial finance to Padak FTC</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1: Pre-construction preparation (1 year)</p> <p>Activity 1.1: Appointment of TA adviser as project manager of the FTC Padak Project (4 years during pre-construction and construction components) and appointment of national technical manager to work with the Project Management Unit in MLFI (4</p>
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Items	Information
	<p>years during pre-construction and construction components).</p> <p>Activity 1.2: Project administration confirms political buy in at national and state level; and from the John Garang Memorial University of Science and Technology. Confirmation of site location and size, and resolution of any land issues. Obtain necessary permissions and permits. Preparation of environmental impact assessment (EIA) by a private company through project administration</p> <p>Outputs: Establishment of the project management function. Appropriate written permissions (where necessary) from, inter-alia, Lands Department JG-MUST, MLFI, Jonglei State authorities. An EIA report, highlighting any environmental concerns for component 2 (Design, build and equip).</p> <p>Component 2: Design, build and equip the FTC at Padak, Bor, Jonglei State. (3 years)</p> <p>Activity 2.1: Preparation of tender documents, tendering and award of the design work and works supervision for the construction of the Padak FTC. (By project admin.)</p> <p>Activity 2.2: Detailed design and costing (by chosen sub-contractor).</p> <p>Activity 2.3: Preparation of tender documents and tendering procedure for the construction of the Padak FTC. Award of construction contract.</p> <p>Activity 2.4: Construction stage. Supervision and monitoring by consulting engineers chosen under activity 1.2</p> <p>Activity 2.5: Detailed design and costing of training equipment, office furniture, computers, photocopiers, etc.</p> <p>Activity 2.6: Preparation of tender documents and tendering procedure for the supply of equipment etc. for the Padak FTC</p> <p>Activity 2.7: Handover and commissioning of buildings and equipment</p> <p>Outputs: Buildings, to house teaching facilities, and the staff of Padak FTC. Equipment for training purposes at Padak FTC. Facilities for research on capture fisheries</p> <p>Component 3: International Technical Assistance to the Padak FTC (6 years)</p> <p>Activity 3.1: International TA adviser to the Manager of the Padak FTC. 3 years. To arrive 2 months prior to the completion of the construction of the FTC. To mentor the FTC Manager and stand in for the Manager of the FTC whilst he is away on international fellowship. He will also assist in curriculum development, teach modules of various courses, liaise with donors and MLFI on training issues and standardisation of national vocational qualifications (NVQs)</p> <p>Activity 3.2: International TA adviser / TA lecturer. 3 years. To follow on from the adviser to the Manager of the Padak FTC, and to advise the newly trained manager of the FTC when the adviser to the Manager leaves. To assist in the running of the FTC, mentor lecturers at the Padak FTC, assist with curriculum development and fill in when lecturers are away on fellowships and attachments.</p> <p>Activity 3.3: International TA adviser / TA fish handling and processing. 6 months. 2 visits over 4 years. To assist the FTC Manager and lecturers in developing courses in fish handling and processing to appropriate standards based on NVQs. Dates decided by FTC manager.</p> <p>Activity 3.4: International TA adviser to develop curricula and a system of certification for graded NVQs in fish processing and handling, safe vessel operation etc. 8 months. 3 visits over 5 years. Dates decided by FTC Manager</p> <p>Outputs: Project inception report, annual plans, project completion report and regular monitoring reports will have been produced. A mission and strategic vision for the Padak FTC. Established administrative systems and protocols for the Padak FTC, including an asset management plan. An operational staff development plan for the Padak FTC to raise staff competencies and Skills, and provide opportunities for industry liaison. A core group of qualified and experienced teaching staff to prepare, participate in and coordinate the delivery of, the sectoral training needs. The establishment of a fisheries training advisory committee to identify and monitor sectoral training and competency requirements. Institutionalised course quality control and monitoring system. Curriculum documents that meet Ministry of Labour, Public Service and Human Resource Development and Ministry of Education, Science and Technology requirements for national vocational training qualifications. Promotion of Padak FTC for use for external training courses, either national or regional.</p> <p>Component 4: Provide fellowships and attachments at academic institutions regionally and internationally and further training for the existing staff of Padak FTC (6 years. To run concurrent with Component 3)</p> <p>Activity 4.1: Based on a review of the requirements carried out by the FTC Manager and FTC international TA adviser the staff of the FTC will have their skills upgraded by fellowships and attachments to regional and international fisheries training centres. Where necessary short courses will also be used to enhance the staff's skills.</p> <p>Outputs: Project management and administrative capacity will have been established,</p>

Items	Information
	<p>which will provide efficient and timely execution of project activities. Institutional capacity to develop other training business opportunities to increase facility utilisation and revenue earning capacity. Institutional capacity to review and develop courses in response to changing industry and government/states need.</p> <p>Component 5: Provide initial finance to Padak FTC to cover costs of establishing the training programmes and initial training activities during the period of the international TA placement (6 years. To run concurrent with Component 3)</p> <p>Activity 5.1: Based on a review of the requirements for the Padak FTC operational costs, provide a basic running costs budget for the Padak FTC for 6 years. This not to include salaries which are the responsibility of the John Garang Memorial University of Science and Technology. Income will begin to accrue to the FTC rapidly once the construction phase is completed, so this budget is intended merely as a stop gap until the centre is fully operative. The financing of the Padak FTC is to be passed to the John Garang Memorial University of Science and Technology after the completion of the project. It is anticipated that the Padak FTC would become substantially self- financing rapidly over time, and could be privatised in 2035.</p> <p>Outputs: Operation of the Padak FTC before it becomes mostly self-financing</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	Architects and consulting engineers Building companies Suppliers of equipment, furniture and building materials
(2) Description of beneficiaries within the framework of the project:	<p>Within the project the beneficiaries will be:</p> <ul style="list-style-type: none"> • Staff at Padak FTC whose skills are enhanced • JG-MUST whose facilities are upgraded • Trainees who receive training at the Padak FTC during its first 3 years of operation after refurbishment. These to include private sector trainees, state and national governments employees, fishing communities and fishers, cooperatives and fisheries producer organisations. • Local building contractors and civil engineers

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<p>The major impacts of the establishment of the FTC lie in the future, and are the result of attendees putting into practice the skills and knowledge acquired by following training courses at the Padak FTC.</p> <p>These include:</p> <ul style="list-style-type: none"> • The sustainability of the fisheries resources of South Sudan, maintaining a catch of more than 200,000 tonnes into the future. (valued at more than SSP4.6 billion at current prices in Juba), due to the introduction of co-management and the establishment of local fishermen's organisations responsible for co-management. • An increase in the value of the catch, by almost 100% from today's value, as catches approach Maximum Sustainable Yield and the quality of the catch improves, increasing its absolute value. • An increase in employment in the fishing industry, including the processing industry, as more value adding is undertaken and exports increase. • An improvement of rural incomes in fishing communities • Additionally research will be carried out at the FTC which will contribute to the long term sustainability of the fish resources in South Sudan.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1" style="width: 100%;"> <tr> <td style="width: 20%;">Negative: b</td> <td>Project:</td> </tr> <tr> <td>Positive: c</td> <td>a: is likely to have minimal or little impact on the environment and/or society</td> </tr> <tr> <td></td> <td>b: may have an impact on the environment and/or society</td> </tr> <tr> <td></td> <td>c: is likely to have a significant impact on the environment and/or society</td> </tr> <tr> <td></td> <td>d: will have a significant impact on the environment and/or society</td> </tr> </table>	Negative: b	Project:	Positive: c	a: is likely to have minimal or little impact on the environment and/or society		b: may have an impact on the environment and/or society		c: is likely to have a significant impact on the environment and/or society		d: will have a significant impact on the environment and/or society
Negative: b	Project:										
Positive: c	a: is likely to have minimal or little impact on the environment and/or society										
	b: may have an impact on the environment and/or society										
	c: is likely to have a significant impact on the environment and/or society										
	d: will have a significant impact on the environment and/or society										
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>Since the Padak FTC existed prior to the project, and is being rebuilt and refurbished on the same site, there are no serious environmental and social negative nor positive impacts of the re-establishment of the centre.</p> <p>(Negative)</p> <ul style="list-style-type: none"> • If there is to be an expansion of area, over and above the existing site, there will probably have to be an EIA undertaken. <p>(Positive)</p> <ul style="list-style-type: none"> • The future activities of the FTC will impact on the whole fishery by contributing to quality improvements, sustainable resources management, exports, health, nutrition improvement, improved incomes and employment. • Every aspect of fisheries will benefit. 										

2.6 Monitoring and evaluation for impact measurement

Items	Information
(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • Infrastructure: Currently the buildings remain, but with smashed doors and windows, and no furniture or equipment making them non-functional. Indicator - presence or absence of functional buildings and equipment at the Padak FTC. • Staff development: Staff are currently dispersed. Staff currently require training and experience. Indicator - completion of attachments and training courses for staff. Completion of mentoring by international TA. • International TA: Currently none. Indicator - presence or absence of the TA during Component 3. • Training: No training courses being held. Last training conducted was in September 2013 on fisheries extension. The course targeted 20 personnel from MLFI Jonglei State. Indicator - commencement and maintenance of programme of training courses. • Funding: No significant funding is provided to the Padak FTC except staff salaries (and these are often late). Indicator – budget and funds released to FTC management, income from hire of facilities and undertaking courses.
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • Infrastructure: Padak FTC, buildings and research buildings, together with equipment are installed. • Staff development: All permanent staff at Padak FTC are qualified to deliver training courses as required. • International TA: International TAs will have been mobilised and undertaken their assignments. • Training: Anticipated courses have been taught to appropriate national and international accredited academic levels. Staff ready to continue the training programmes set up. • Funding: The Padak FTC has become mainly self-funding through cost recovery on fisheries related courses and through the hire of facilities (training and research), after a period of external funding of running costs.
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> • Visual Inspection and engineers reports. • Tender awards • Project monthly reports and inspections • International TA reports • Padak FTC monthly and annual reports • Padak FTC annual accounts • JG-MUST annual reports • MLFI annual reports
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> • Project Management • International TA at Padak FTC • FTC Manager and administration • MLFI • Ministry of Finance (Directorate of Planning) • JG-MUST management

2.7 Required human resources

(1) Principle of human resources management:	The staff of the centre will be part of the staff of the John Garang Memorial University of Science and Technology. (JG-MUST)
(2) Required human resources in the public sector (Positions, grades and numbers):	<p>Established staff</p> <p>1 Centre Manager. 1 Assistant Centre Manager 4 lecturers. Post-harvest. Fishing operations and gear. Fisheries management. Outboard and diesel engine maintenance. 1 Administrative assistant (Accounts and administration) (This is an increase of 1 lecturer and 1 administrative assistant)</p> <p>Un-established staff</p> <p>2 boatman/fishermen 2 cleaner 1 gardener 6 guards Labourers etc up to max of 20</p> <p>Currently there are 5 lecturers and 20 un-established staff.</p>
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>1 TA adviser to the FTC Padak Project to work with the MLFI (4 years during pre-construction and construction components). 10 years suitable experience in project management in the region.</p> <p>1 locally recruited national technical manager to work with the CAMP/IDMP Implementation Coordination Task Team in MLFI (4 years). Graduate with suitable experience in project administration</p> <p>1 Adviser to the Training Centre Manager. BSc or equivalent teaching qualifications and suitable experience. 3 years 1 Adviser general fisheries lecturer. Suitable experience and qualifications 3 years 1 Adviser fish handling and processing. Suitable experience and qualifications 6 months</p>

Items	Information
	<p>1 Adviser curriculum development. Suitable experience and qualifications 8 months (Note that in the shift to vocational type training the short term international TAs' qualifications should be based more on relevant experience than academic excellence).</p> <p>Other private sector human resources will be contracted as part of the design and construction activities of the project. Numbers and qualifications will be decided by the private contractors.</p>

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:

(2) Explanation of expected risks:

M	L: Low	M: Medium	H: High	(select an indicator from the list)
<p>During project period</p> <ul style="list-style-type: none"> • Weak buy in by government or JG-MUST • Land ownership issues at Padak FTC • Delays in getting appropriate permissions for construction • Flooding – area liable to flooding in wet season • Difficulties in recruiting international TA • Civil disturbances • Availability of suitable contractors in Jonglei • Availability of suitable design and supervision • Willingness of international TA to live in Jonglei. <p>Long term, affecting the success of the centre, when the Centre is running routinely</p> <ul style="list-style-type: none"> • Centre management and staff commitment • JG-MUST and MLFI commitment • provision of adequate and on-going funding from the GRSS for the operation of the Padak FTC after donor funds end • industry support of the Padak FTC • the success of transition to fee paying courses • successful utilisation of facilities by non-fisheries actors • continued GRSS promotion of the development of a domestic fisheries sector • No overfishing of the resources. (No fish = no industry) • HIV in Padak FTC project trained staff cohort, leading to loss of staff and inability to run some courses • lack of recurrent budget for national and state training courses leading to reduced income • low take up from the private sector for training services in the sector 				

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:

<p>The importance of establishing a training and research institution for capture fisheries in South Sudan cannot be overemphasised. It is imperative to increase the value of the catch through improved handling and processing, and also to avoid overfishing of the resources.</p> <p>Research into fisheries in South Sudan stopped with independence from Britain in 1956. Currently there is no applied research at all being done on fisheries in South Sudan and this is another gap that needs to be filled.</p> <p>A satisfactory system of managing the project needs to be set up. It is here proposed that a part time Project Manager is located in Juba and works with the MLFI, and has a full time national technical manager to assist him and undertake basic project management functions when he is not in country. The project managers' activities would reduce as the other international TA is placed at Padak FTC, though overall management of the project would remain with the project manager throughout the period of the project implementation.</p>

2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.

<p>Once the project is finished the South Sudan government would be expected to fund the salaries of the staff of the Padak FTC, as they do now. These staff numbers can be found above.</p> <p>Additional financial resources from the national government through MLFI will be required to fund</p> <ul style="list-style-type: none"> • the maintenance of the infrastructure (5% of investment costs/year) • training courses undertaken under the auspices of the national government through MLFI <p>States will be expected to fund from their development budgets</p> <ul style="list-style-type: none"> • training courses undertaken under the auspices of the state governments <p>Other income will be forthcoming from a variety of sources to fund courses and to hire the facilities: the private sector, DPs and NGOs, research organisations, and international organisations.</p>

Items	Information
	<p>Training courses to be held at the Padak FTC</p> <p>National and state staff development</p> <ul style="list-style-type: none"> • Extension skills for extension workers (states). • Diploma course (1 year intensive) • Data collection and interpretation under the FIS (Fisheries Information System) • Principles of co-management of fish resources (and follow on courses) <p>Fishers skills enhancement</p> <ul style="list-style-type: none"> • Village fish processing (enhanced smoke and drying, other processing and the use of ice, basics of fish quality etc.) • Basic outboard engine repair and maintenance • Small business skills for fishers • Fisheries management, co-management and fishing organisations • Fisheries cooperatives establishment. Principles, functions and • Refrigeration for ice machine and chill rooms • Rural fishing skills course. (Gear, fish handling, processing, small boat handling and safety on the river, marketing and small business management) • Fisheries as a small business (women's course), net making, fish processing and other fisheries related subjects <p>Vocational Training. NVQs. Income generating activities. Processing and handling (PH) These qualifications provide individuals with the skills needed to work in a small fish processing plant. All students taking PH2 have to have successfully passed PH1. All students taking PH3 have to have successfully passed PH3.</p> <ul style="list-style-type: none"> • PH1 Processing and Handling 1 (for entrants to the fish processing industry) • PH2 Processing and Handling 2 (for processing line supervisors) • PH3 Processing and Handling 3 (for factory managers and floor managers) • HACCP in fisheries (To FDA standards) <p>Seamanship</p> <ul style="list-style-type: none"> • Small boat safety <p>Internationally recognised qualifications Additionally, over time and perhaps with additional equipment for the engineers' courses, it should be possible to train river boat crews and officers to international standards at Padak FTC. Courses for:</p> <ul style="list-style-type: none"> • Coxswain –small boat • Mate 1 • Mate 2 • River Captain • Engineer 1 • Engineer 2 • Engineer 3 <p>Other uses of the centre (cost recovery basis)</p> <ul style="list-style-type: none"> • Annual Fisheries Officers meeting (national and states) • Hire out to regional organisations for short courses • Hire out of facilities to NGOs and DPs for courses or short training or workshops • Hire out of facilities to national and state governments for courses or short training or workshops (non- fisheries) • Hire out facilities to private organisations for their training courses eg: tourism industry • Sale of ice • Other fisheries projects being implemented where training is required (FIS etc)

04.17 Establishment of fisheries training and research institute project (cont.)

Cost group	SSP/USD = 4																											
	Phase 1			Phase 2			Phase 3			Phase 4			Total															
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000	% to total	
Project duration																												
Total (SSP '000)	2,289	6,883	8,829	9,795	6,355	4,365	3,906	3,906	3,906	3,906	3,906	3,906	3,906	3,906	3,906	3,906	3,906	3,906	3,906	3,906	3,906	3,906	3,906	3,906	3,906	3,906	54,141	100%
Total (USD '000)	572	1,721	2,207	2,449	1,589	1,091	977	977	977	977	977	977	977	977	977	977	977	977	977	977	977	977	977	977	977	977	13,535	
% to total	4%	13%	16%	18%	12%	8%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	100%		

Public sector project
 Private sector project
 Routine work by government
 Routine work by private sector

5.4.15 Establishment of national aquaculture research and training centre project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Fisheries		
(2) Project name:	Establishment of national aquaculture research and training centre project		
(3) Project ID:	04.18 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2024/25	Ending FY: 2031/32	Duration (years): 8
(5) Total investment:	SSP 31,653,000	USD 7,913,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FI.SA2	Public sector institution and management capacity development	Table 2-3
(2) Government organisation:	06	MAR-FA	Directorate of Fisheries and Aquaculture Development	Table 2-6
	09	MAR-RD	Directorate of Animal and Fisheries Research and Development	Table 2-6
(3) Activity types:	101	ID-LI	Legal and Institutional Development	Table 2-12
	204	SP-RE	Research and experiment	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	X
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	
	72	JG	Jonglei State	
	73	UT	Unity State	
	81	WA	Warrap State	
	82	NB	Northern Bahr el Ghazal State	
	83	WB	Western Bahr el Ghazal State	
	84	LK	Lakes State	
	91	WE	Western Equatoria State	
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/15-2020/21, 5 years)	
	02	PH2	Phase II (2020/21-2025/26, 5 years)	X
	03	PH3	Phase III (2025/26-2030/31, 5 years)	
	04	PH4	Phase IV (2030/31-2040/41, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	
	02	GBT	Greenbelt Livelihood Zone	X
	03	HAM	Hills and Mountains	
	04	ISP	Ironstone Plateau	
	05	NSR	Nile-Sobat Rivers	
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
52	NGL	NGO loans and equity financing		

Items	Information	
61	FGI	Financed by generated income

Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

<p>Aquaculture in South Sudan is underdeveloped, mostly due to the long periods of upheaval and subsequent lack of investment that have occurred in recent history.</p> <p>Currently South Sudan has no aquaculture training unit, no aquaculture research unit and no fish hatcheries. This project seeks to establish an aquaculture centre that has all three facilities in one, and can become a centre of excellence in aquaculture for South Sudan and the region. It is essential that such a centre is established, so that aquaculture can expand.</p> <p>Currently subsistence fish farming only has been promoted by NGOs and FAO, with roughly 80 small subsistence ponds owned by villagers. Pond area, almost entirely in the Greenbelt Livelihood Zone, is less than 2 ha and production less than 2 tonnes per year.</p> <p>Aquaculture should be a major factor in the development efforts in agriculture and fisheries in South Sudan, since it is capable of producing large amounts of protein to feed a growing population, the technology is relatively simple and well known from other parts of Africa (Ghana is a good example and Egypt produces more than 500,000 tonnes of aquacultured products), and for Tilapia especially, China is the leading world producer and exporter of Tilapia with a production of more than 1.2 million tonnes (2012).</p> <p>It is anticipated (CAMP 2013) that by the year 2040 that:</p> <ul style="list-style-type: none"> • up to 2000 entrepreneurial and small scale farmers could be producing 10,000 tonnes of fish per year from subsistence fish farming and small scale commercial fish farming in the Greenbelt Livelihood Zone • a further 60,000 tonnes could be produced by 2040 from large scale commercial aquaculture run entirely by the private sector. • a large number of subsistence farmers would also be expected to contribute to production, through small village ponds, though the absolute quantities in subsistence farming are low, they have great benefits for the households which adopt village aquaculture. <p>This adds up to a very significant amount of fish production, and would greatly contribute to employment, food security and economic growth in the region.</p> <p>South Sudan is fortunate that the conditions in the Greenbelt Livelihood Zone, covering the southern parts of Central Equatoria State (CES) and Western Equatoria State (WES) are very suitable for aquaculture, with suitable land and soils, permanent water and streams allowing for gravity feeds to ponds. Other parts of the country are not so suitable for a variety of reasons, not least a lack of water resources but also the need to pump water due to flat topography, very high summer temperatures, and migratory livestock rearing reducing the opportunities for Integrated Agriculture and Aquaculture (IAA).</p> <p>Rivers and the larger lakes do however offer some opportunities for cage farming, which may well happen in the future. Similarly in the future there may be opportunities for fish farming in irrigation schemes, either fish/rice culture, cage culture in dams, or wide scale ranching in irrigation channels and canals. Hydropower dams also may present further possible sites. At the moment there are no dams or irrigations schemes suitable for aquaculture.</p> <p>The two main aquacultured species in Africa, <i>Clarius garipinus</i> (the “African” catfish) and <i>Oreochromis niloticus</i> (the “Nile” tilapia), are both endemic to the Nile basin. As there are very many indigenous species in the Nile basin there are likely to be other local candidate species for aquaculture in South Sudan in the future (eg: indigenous carps and other catfish). There is also a good market, particularly in the towns of CES and WES, because most of the towns away from the Nile itself have very poor fresh fish supplies and subsequent high prices.</p> <p>As well as establishing the National Aquaculture Training and Development Centre the government will also have to provide for: a) a land policy that is attractive for large scale aquaculture, given that it is a long term investment and requires considerable capital, b) a financial system that can provide investment funds to entrepreneurs and c) a legal framework that protects the industry. Investors will be looking for security in a variety of areas, such as:</p> <ul style="list-style-type: none"> • security of tenure on the lands where they have made their investments; • security from pollution and water contamination; • bio-security, so that they can be as free of introduced pathogens as possible, and free

Items	Information
	<p>of the dangers of introductions and transfers of exotic species;</p> <ul style="list-style-type: none"> • the security of knowing that the feeds they buy and use from local feed manufacturers are pure and unadulterated; • the security of being part of an export orientated industry that conforms to HACCP and EU quality control rules, and other import regulations regarding residues and contaminants; and • physical security for themselves and their staff and equipment on the farm site, and on the roads and in the towns. <p>All of these components (apart from physical security and land tenure) are being addressed under other projects under the CAMP Investment Plan:</p> <p>The problems that the project seeks to overcome are:</p> <ul style="list-style-type: none"> • Problem 1: There are no facilities in South Sudan for training in aquaculture, research in aquaculture, nor a hatchery. • Problem 2: There is very little aquaculture in South Sudan, despite the Greenbelt Livelihood Zone being ideal for aquaculture, both subsistence, IAA and large scale commercial aquaculture. • Problem 3: Very few south Sudanese nationals are qualified at any standard, to participate in the development of aquaculture in South Sudan. For the industry to expand there needs to be a cadre of trained individuals available, at all levels. • Problem 4: There is no planned training in aquaculture. No programme of training exists to satisfy the future demand for skills in the sector. (The major developments will be in large scale commercial aquaculture, so technicians for hatcheries, grow-out and processing are all required, as well as managers, lab technicians and disease control experts.) • Problem 5: The sector needs a long term plan for training, which is responsive to changes in emphasis and technology in aquaculture as time passes. • Problem 6: The commercial industry (which as yet does not exist) will need to be able to guide activities in research and training. A system will have to be set up to enable industry participation in all aspects of the Aquaculture Centre's activities. • Problem 7: No training skills in aquaculture. There are no qualified trainers in aquaculture, particularly the practical side of the industry, available in South Sudan. • Problem 8: There is currently no funding for initiating aquaculture research and training. <p>Donor funding within this project is sought to begin the process. Later on some aspects of the Aquaculture Centre could be self funding (through sale of fingerlings, fish, charging for courses, hiring out facilities), but some long term recurrent expenditure from the national government will be essential.</p>
(2) Objectives:	<ul style="list-style-type: none"> • A staffed and fully operational National Aquaculture Training and Research Centre providing the basic facilities to hold residential training courses, both long duration and short duration, appropriate to the growing needs of the large scale commercial and small scale aquaculture sector in South Sudan, including the MLFI and state Administrations; and for a basic research capability to cover aquaculture needs in South Sudan. • Ensure that the centre is staffed with suitably qualified staff • Train MLFI, state and other government employees • Provide training to the private sector, including national vocational qualifications (NVQs). • Operate the National Aquaculture Training and Research Centre so as to achieve national goals in aquaculture. • Undertake relevant research in aquaculture for South Sudan
(3) Overall description including temporal and spatial extent of project:	<p>The project will establish the National Aquaculture Training and Research Centre from scratch, since there is no such institution existing in South Sudan.</p> <p>The centre will consist of facilities for training and research including classrooms, a hatchery, algae room, feed room, feed store, wet room, larval rearing facilities, accommodation and a canteen. Ponds will be constructed and will include a covered spawning pond, grow out, stock, nursery, broodstock and experimental units, with gravity feed water supply and drainage. A 2 hectare man-made wetland for nutrient scrubbing of effluent will also be included so that the facility is ecologically neutral.</p> <p>Technical assistance will be provided to assist and mentor the staff of the centre and to initiate activities in training and research in aquaculture. Some of the staff will receive attachments regionally for additional training.</p> <p>Funding for initial activities will be provided to the centre to enable the smooth running of the centre in its first years of existence.</p>
(4) Component structure:	<p>Component 1: Pre-construction.</p> <p>Component 2: Construction and equipment provision</p> <p>Component 3: Transfer of MLFI DoFAD aquaculture staff to Aquaculture Centre</p> <p>Component 4: Capacity development</p>

Items	Information
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Component 5: Financing

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

Component 1: 2 years. Pre-construction

Activity 1.1: Appoint project manager for pre-construction and construction components, to work with CAMP/IDMP Implementation Coordination Task Team and on site during construction (2 years over 5 years, 6 visits).

Activity 1.2: Affirmation of political buy in at national and state level.

Activity 1.3: Site identification, probably at or near Yei in the Greenbelt Livelihood Zone. Attached to existing institutions if the soil types and hydrography are suitable. Site surveys.

Activity 1.4: Confirmation of site location and size and removal of any land issues. Obtain necessary permissions and permits.

Activity 1.5: Undertake environmental impact assessment (EIA). Local company through prudent shopping process.

Activity 1.6: Restricted tender for civil engineer to undertake design work. Must include specialist design of a constructed wetland to scrub water effluent from the centre

Activity 1.7: Design work carried out including detailed plans and bills of quantities

Activity 1.8: Tender process for civil works. Award of tender.

Activity 1.9: Preparation of equipment list

Activity 1.10: Tender process for equipment for the centre. Award of tender

Outputs: Institutional and land barriers to the establishment of the National Aquaculture Training and Research centre are overcome. EIA is completed. A suitable design, bill of quantities, and equipment list is prepared. Tenders are prepared and awarded for the construction and equipping of the Aquaculture Centre

Component 2: 3 years. Construction and equipment provision

Activity 2.1: Build the National Aquaculture Training and Research Centre.

Activity 2.2: Supervision and quality control of building process

Activity 2.3: Delivery and installation of basic equipment

Outputs: Construction and equipping of the Aquaculture Centre is effected

Component 3: Transfer of MLFI DoFAD aquaculture staff to Aquaculture Centre

Activity 3.1: All aquaculture staff at MLFI (Directorate of Fisheries and Aquaculture Development) are transferred to the National Aquaculture Training and Research Centre. Director, 2 deputy Directors and 4 inspectors to make up the core staff of the centre.

Outputs: The current aquaculture staff within the MLFI are transferred to the Aquaculture Centre providing the cadre of aquaculture specialists for the centre.

Component 4: 3 years. Capacity development for the National Aquaculture Training and Research centre

Activity 4.1: Provide fellowships and attachments at academic institutions regionally and internationally and further training for the staff of the Aquaculture Centre

Activity 4.2: Provide international TA adviser to the Aquaculture Centre Manager to mentor the Aquaculture Centre Manager (1 position 3 years), hatchery adviser and growout adviser (2 positions, 12 MM each). Provide short term international TA to develop staff skills in business development, feed formulation, algal culture, genetic improvement, and curriculum development as required by Centre Manager. 24 MM over period of the project.

Activity 4.3: Develop Operational Plans and Asset Management Plans for the National Aquaculture Training and Research Centre, as well as a management structure including a Board of Trustees to oversee the activities of the centre.

Activity 4.4: Develop training courses and NVQs appropriate to the aquaculture needs of the country

Outputs: The staff of the Aquaculture Centre are trained to a standard so as to be capable to run the centre and maintain its activities for the benefit of the country. Appropriate activities for the training and research to be undertaken in the centre are developed. Management plans for the centre

Component 5: Financing 3 years running concurrent with Component 3

Activity 5.1: Provide finance to National Aquaculture Training and Research Centre, to cover costs of establishing the training programmes and initial training activities during the period of the international TA assignments.

Outputs: Funding enables the centre to operate during its first years whilst developing sources of revenue and ensuring states' and national recurrent funding.

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:

<p>Consulting engineers Environment company Equipment suppliers</p>

Items	Information										
(2) Description of beneficiaries within the framework of the project:	<p>Construction company Consulting company (international TA)</p> <p>Short term</p> <ul style="list-style-type: none"> • Construction company and equipment suppliers • Consultants <p>Long term</p> <ul style="list-style-type: none"> • Small scale fish farmers in South Sudan • Commercial fish farming enterprises • Feed and other service providers • Fish consumers, processors and exporters 										
2.4 Outcomes, impact and contributions to value added (i.e. economic growth)											
(1) Outcomes and impact:	<p>The Aquaculture Centre will contribute to the rapid increase in aquaculture activity in South Sudan by providing training and undertaking research on aquaculture.</p> <p>It is anticipated that by 2040 the South Sudan will be producing more than 70,000 tonnes of aquacultured fish per year. This will not happen unless an aquaculture centre is established to provide the necessary support to the industry.</p>										
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)										
2.5 Environmental and social impact, and mitigation measures											
(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1" style="width: 100%;"> <tr> <td style="width: 15%;">Negative: b</td> <td>Project:</td> </tr> <tr> <td>Positive: c</td> <td>a: is likely to have minimal or little impact on the environment and/or society</td> </tr> <tr> <td></td> <td>b: may have an impact on the environment and/or society</td> </tr> <tr> <td></td> <td>c: is likely to have a significant impact on the environment and/or society</td> </tr> <tr> <td></td> <td>d: will have a significant impact on the environment and/or society</td> </tr> </table>	Negative: b	Project:	Positive: c	a: is likely to have minimal or little impact on the environment and/or society		b: may have an impact on the environment and/or society		c: is likely to have a significant impact on the environment and/or society		d: will have a significant impact on the environment and/or society
Negative: b	Project:										
Positive: c	a: is likely to have minimal or little impact on the environment and/or society										
	b: may have an impact on the environment and/or society										
	c: is likely to have a significant impact on the environment and/or society										
	d: will have a significant impact on the environment and/or society										
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • The National Aquaculture Training and Research Centre is a small institution with, in itself, little environmental impact. Despite this an EIA is necessary, so as to confirm that the effluent water will not impact on the environment. The solution proposed in the project to mitigate against pollution of water courses, downstream water and groundwater by effluent water is by using a constructed wetland to scrub the effluent water. The constructed man-made wetland will provide habitat for a variety of birds and animals, so will contribute to bio-diversity in the area. • The establishment of the National Aquaculture Training and Research Centre is a microcosm of aquaculture in general. Potentially aquaculture can negatively affect the environment. • Feeds can be contaminated which will be mitigated against by regulations to be effected under another CAMP project • Introductions and transfers of species and genetically improved fish can occur, which will be mitigated against by the application of strict quarantine, which is covered under a Livestock project. It is fortunate that the two main aquacultured species in Africa are Tilapia, <i>Oreochromis niloticus</i> and African catfish <i>Clarius garipinus</i>, which are both endemic in the Nile and surrounding waters. Research on other species would be restricted to those occurring locally, notably Nile carp <i>Labeo niloticus</i>, <i>Gymnarcus niloticus</i>, and <i>Barbus binni</i> • It is possible that workers at the National Aquaculture Training and Research Centre could experience higher rates of bilharzia (schistosomiasis) due to exposure to the causative agent in the ponds. Bilharzia tends to affect young people worst, before they have developed concomitant immunity. Treatment with Praziquantel® is cheap, safe and effective. The water of the ponds and constructed wetland will harbour mosquitoes which may lead to increased incidence of malaria. Malaria is endemic in the area. Symptoms and treatment are well known. The population has some innate and also some acquired immunity from long exposure. River blindness (Onchocerciasis) is transmitted by black flies (<i>Simulium sp</i>). Their larvae, however, favour rapidly running water. There is probably little problem of river blindness associated with pond development. • Leishmaniasis is a vector-borne disease that is transmitted by sandflies which is endemic throughout South Sudan. Leishmaniasis is locally called "kala azar". It is possible that the pond surrounds may be suitable for sandflies to breed and shelter which may increase incidence of the disease in farm workers. • Although there are many other pathogenic bacteria, flukes and nematodes associated with fish and water, and other rarer diseases such as Buruli Ulcer, none of them are usually particularly significant in aquaculture. <p>(Positive)</p> <ul style="list-style-type: none"> • Aquaculture has proved to be attractive to women and women's groups who have established several community and group small scale enterprises, growing tilapia. Their success has been muted, for various reasons, but includes failure of support from donors. 										

Items	Information
	<ul style="list-style-type: none"> • The project will mitigate against the failure of donors to maintain support to aquaculture as has occurred in the past. • The project will contribute to the rapid economic growth of the Greenbelt Livelihood Zone by providing necessary services to the aquaculture industry.

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	At present there is no National Aquaculture Training and Research Centre in South Sudan At present there is little aquaculture taking place in South Sudan The indicators are the presence or absence of the Aquaculture Centre, as specified in the design documents; and the production of fish from aquaculture in South Sudan
(2) Measurable indicators and situation at the end point:	At the end of the project there should be a fully equipped National Aquaculture Training and Research Centre, staffed with trained lecturers and researchers, enhancing the aquaculture skills of the fish farmers of South Sudan, and undertaking necessary research into aquaculture in the country. The indicators are: <ul style="list-style-type: none"> • Presence or absence of aquaculture centre and ponds as specified in the design documents • Presence or absence of the staff, and the training they have received • Operation of the various parts of the National Aquaculture Training and Research Centre, such as training, hatchery, research, and fish production. • Production of fish in South Sudan <p>Note that the measurements should be based on the effectiveness of the Aquaculture Centre, rather than just the presence or absence of the staff and infrastructure.</p>
(3) Methods of measurement and sources of information:	NATRC monthly reports and annual report Consultants Reports MLFI annual reports
(4) Responsible parties for the monitoring and evaluation:	NATRC management MLFI Consultants

2.7 Required human resources

(1) Principle of human resources management:	Autonomous training institution governed by a Board
(2) Required human resources in the public sector (Positions, grades and numbers):	1 director, 2 deputy Directors 4 inspectors Grade All moved from the MLFI. 20 un-established staff (to be recruited)
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	1 Project manager for construction component, to work with the CAMP/IDMP Implementation Coordination Task Team) and on site during construction. (24 MM over 5 years, 6 visits). Qualified engineer with experience in development of ponds and aquaculture facilities. 10 years experience. Knowledge of man-made wetlands would be an advantage. 1 Adviser to the Aquaculture Centre Manager to mentor the National Aquaculture Training and Research Centre and to act as hatchery manager. 3 Years. At least BSc in aquaculture or equivalent. 10 years experience in aquaculture, 3 of which in Africa with at least 3 years working in a similar type of institution. 1 growout adviser. 1 year. NVQ, diploma or BSc. Experience in African Aquaculture 1 specialist hatchery adviser. 1 year. NVQ, diploma or BSc. Experience in African aquaculture with hatchery techniques for tilapia and other species. Short term international TA to develop aquaculture techniques staff skills in feed formulation, algal culture, genetic improvement, develop curricula etc. Short term TA = 24 months over period of the project. Support staff to the international TA as required.

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	M L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	<ul style="list-style-type: none"> • Failure to transfer staff from MLFI • Difficulties obtaining land • Adverse soil and hydrological conditions • Low take up due to previous lack of follow up by NGOs in aquaculture • Pollution from the National Aquaculture Training and Research Centre will be mitigated by the use of a constructed wetland to scrub water outflows before they reach watercourses, so eutrophication of surrounding water areas will not occur.

Items	Information
	<ul style="list-style-type: none"> • There are no standards for fish feed in South Sudan. These will be developed as the industry expands, especially when large scale commercial fish farming is instigated by investors, but it is recommended that in the meantime the industry should use the FAO COPs for feeding fish • No species used for fish farming in South Sudan will be introduced to the country or transferred from areas outside the ecological zone. Genetically Improved Farmed Tilapia (GIFT) pose a threat to the wild genetic biodiversity of tilapia. Any introduction of GIFT will follow the Worldfish “Code of Practice and Manual of Procedures for the Introduction of GIFT to Africa” • The project will introduce fish farming as a profitable business activity, and as a subsistence activity, creating incomes and employment widely throughout the Greenbelt Livelihood Zone, however climate change may alter the suitability of the region for aquaculture. • Disease may be a problem in fishing farming communities, as a result of contact with water and the water harbouring pathogens.

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	Without such a centre commercial aquaculture cannot develop in South Sudan, and subsistence aquaculture will be developed very slowly.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	The National Aquaculture Training and Research Centre will continue to operate under recurrent funding under MFLI overall control until it is privatised in 2035. The centre should become self financing, through the hire of facilities, sale of fingerlings and fry, cost recovery on training for NVQs and commercial fish farmers, and injections of cash from DPs and NGOs wishing to improve fish farming throughout the country and to hire the facilities of the National Aquaculture Training and Research Centre.
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04.18 Establishment of national aquaculture research and training centre project (cont.)

Project duration	Phase 1		Phase 2		Phase 3		Phase 4		Total																		
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000	% to total
5 Social assistance/donation (Emergency)																											
Total (SSP '000)																											
Total (USD '000)																											
% to total																											

SSP/USD = 4

Public sector project
Routine work by government

Private sector project
Routine work by private sector

5.4.16 Fishers and fisheries communities training project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Fisheries		
(2) Project name:	Fishers and fisheries communities training project		
(3) Project ID:	04.19 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2024/25	Ending FY: 2039/40	Duration (years): 16
(5) Total investment:	SSP 2,946,000	USD 736,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FI.SA5	Fisheries management and productivity enhancement	Table 2-3
(2) Government organisation:	06	MAR-FA	Directorate of Fisheries and Aquaculture Development	Table 2-6
	03	MAR-AD	Directorate of Administration, Finance and Human Resource Development	Table 2-6
(3) Activity types:	203	SP - EX	Service delivery/Infrastructure development Extension and Training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	X
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	
	82	NB	Northern Bahr el Ghazal State	
	83	WB	Western Bahr el Ghazal State	
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	
	92	CE	Central Equatoria State	X
93	EE	Eastern Equatoria State		
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	X
(5) Planning time horizon (start):	01	PH1	Phase I (2015/15-2020/21, 5 years)	
	02	PH2	Phase II (2020/21-2025/26, 5 years)	X
	03	PH3	Phase III (2025/26-2030/31, 5 years)	
	04	PH4	Phase IV (2030/31-2040/41, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	
	03	HAM	Hills and Mountains	
	04	ISP	Ironstone Plateau	
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	X
	03	SP	State project	X
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	X
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>The lack or shortage of skills in fishing communities is one of the main impediments to the sustainable development of fisheries in South Sudan. Capacity building is needed throughout fishing communities to improve the standard of management of fisheries, so as to ensure sustainable exploitation of the fisheries resources of the country into the future.</p> <p>Technical training and extension are two important elements of capacity building. Training for the fishery sector is no less a continuous process than in any other sector, nor is the basic need for training any different. Therefore, this project seeks to engage Padak Fisheries Training Centre (Padak FTC) at Bor, Jonglei State for training of fishermen in an ongoing programme of management, technical, and business skills to improve their livelihoods; and also to inculcate the principles of sustainable management of fisheries into fishing communities.</p> <p>Specific requirements for training in this sector differ greatly from location to location and up to now training, the opportunities for training and standards of training are often not consistent with the actual needs of the country. This is partly due to the fact that the scope of training needs for the wide range of disciplines in the fisheries sector has not always been clearly defined.</p> <p>A contributory factor in this respect is inadequate manpower planning programmes. The numbers of persons involved in the harvest and post-harvest sectors are not known, as there has never been a thorough fisheries census enumerating the scale of the industry.</p> <p>Consequently, there is major concern that fishery education and training needs are not being adequately catered for in the country. However CAMP, through a proposed project seeks to overcome this problem by strengthening the Padak Fisheries Training Centre so that it can provide the necessary training.</p> <p>The problems that the project seeks to overcome are:</p> <ul style="list-style-type: none"> • Problem 1: Inadequate qualified fishers to develop the fishing industry. Additionally the issues of post-harvest management techniques need to be addressed to improve fish quality and value as well as the lack of comprehension of sustainable management of wild fisheries to ensure sustainability. • Problem 2: Lack of relevant training programmes for the industry. Training programmes should be based upon clearly defined needs and realistic assessments of existing trained or experienced manpower and current technology. Training should be categorized as to subject and target recipients. • Problem 3: No training has been given for users of the resources on fisheries sustainability and the need for enforcement of rules and regulations. Particular attention should be given to the training of community, producer organisations, co-operatives and village leaders, so that the message of conservation and sustainability of natural resources can be re-enforced. • Problem 4: Lack of improved training techniques and methodologies. This needs to be developed and special training equipment and simple materials should be prepared to meet the needs of illiterate and semi-literate people. In this respect, national efforts to raise the general educational level in fishing communities are important. Practical classroom and on-the-job training of artisanal fishers should be enhanced. The use of fisheries producer organisations, fisheries cooperatives, beach landing committees and other local groups as targets for training should also be encouraged. • Problem 5: Inadequate attention to the design and monitoring of on-the-job training programmes. Particular attention should be paid to the design and monitoring of on-the-job training programmes for selected fishing communities. Attention should be given to the training of local fishers and fisheries administrators in basic resource management, in environmental protection, in the operation and management of fishers' organizations, and in activities associated with social development, youth and gender
(2) Objectives:	<p>The objective is to train workers and decision makers in the fisheries sector in fishing communities in an appropriate manner so that the capture fisheries of South Sudan are fished in a sustainable manner, and the catch processed appropriately, maximising employment, income and economic return to the country and to the communities in the Nile Sobat.</p>
(3) Overall description including temporal and spatial extent of project:	<p>This training programme is for the fishing communities, and workers in the fisheries sector, including post harvest operatives in South Sudan.</p> <p>The project activities will be executed by Padak Fisheries Training Centre, but funded by the national government, state governments, DPs and NGOs. The project will cover the whole of the Nile-Sobat Rivers Livelihood Zone, from Nasser in the East and down the</p>

Items	Information
	<p>Nile from Malakal in the North to Terekeka at the southern end of the Sudd, and the areas adjacent.</p> <p>The majority of the training will be done by outreach in villages adjoining the Nile, by members of the Padak FTC in training camps using tailored workshops and short modular courses. This kind of training will include, <i>inter alia</i>, principles of co-management, cooperative formation, fish handling, use of ice, post harvest methods to reduce losses, HIV and gender awareness, basic business management, and fishing methods. Some of the more theoretical training such as formation of beach landing committees and resource management will be carried out by bringing in community leaders and beach management committee members into the Padak FTC using more formal training classroom methods, adapted to the educational abilities of the participants.</p> <p>Participants are expected to be roughly equally men and women, since women are often community leaders and are very actively involved in fisheries through their activities in processing and marketing of the catch. Gender and HIV awareness will be included as part of both the outreach and residential courses.</p> <p>It is anticipated that 6 courses of 5 days will be held every year for 20 years, with 25 participants per course, in outreach courses in the fishing communities. This is 120 courses and 3000 participants over 20 years.</p> <p>Additionally a 5 day course for those involved in co-management, of 20 participants per course, will be held at Padak FTC once a year for 20 years. 400 participants in all.</p> <p>Courses will be an ongoing activity for the whole period from 2024 to 2039, limited in numbers by: the ability of Padak FTC to carry them out (6 outreach and one residential courses per year); its ability to maintain funding from the national government through recurrent funding for the John Garang Memorial University of Science and Technology (JG-MUST) and the states fisheries administration budgets, and also from DPs and NGPs who are involved in fisheries through development projects.</p>
(4) Component structure:	<p>Component 1: Design of outreach scheme, courses and workshops Component 2: Delivery of training to target areas and villages</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Design of outreach scheme, courses and workshops. The majority of the course modules and workshops will have already been designed during the re-establishment of the Padak FTC. As time progresses the Padak FTC will have to introduce new courses and tailored workshops to address the emerging challenges of a growing fishery, overfishing of the resources, and the enforcement of rules and regulations. As the project progresses there will also have to be modifications to the original designs of course modules and workshops to reflect realities in the field.</p> <p>Component 2: Delivery of training to target areas and villages. Due to the complexity of running training camps, it is unlikely that more than 6 camps can be run in any one year (Padak FTC has other commitments as well as outreach and training camps)</p> <p>Activity 2.1: Target fishers are identified. Before the start of the training the target group is identified from the areas in the Nile Sobat ecological zone where fishing pressure is greatest. This will be done by the states' fisheries administrations and extension workers using an agreed list of criteria through a needs assessment for each fishing community.</p> <p>Activity 2.2: Cost estimates finalised and lists of equipment assembled. Budget agreed.</p> <p>Activity 2.3: All necessary preparations with the target community and consultations with elders and chiefs in that community completed. Includes course venue, times and dates.</p> <p>Activity 2.4: Necessary equipment and materials assembled in Padak FTC. The equipment will already be in place from the Padak store, but extra materials, flipboards, whiteboard markets etc will need to be acquired for each trip. Consumables such as fuel for the generator will also need to be sourced.</p> <p>Activity 2.5: Transport and travel to target areas. This will be done by boat (if near to Padak FTC, or by air, road and boat if further away).</p> <p>Activity 2.6: Delivery of course modules and workshops.</p> <p>Outputs: Each year it is expected that a minimum of 6 training camps will be held in various areas, decided after consultations with the states' fisheries administrations, country fisheries officers and fishing communities. Each training camp will feature a selection of training modules, appropriate to the location and make up of the participants. The number of training camps will ultimately depend on the state governments' ability to dedicate funding from their own budgets and attract funding from DPs and NGOs, and the other calls on the Padak FTCs time and personnel resources. One residential course per year of one week for co-management leaders</p>

Items	Information										
	is also envisaged. 2250 workers in the fisheries sector trained over 15 years. 300 co-management/community leaders trained in residential courses over 15 years										
2.3 Service providers and beneficiaries											
(1) Description of service providers within the framework of the project:	The main service provider will be the staff of the Padak FTC who will implement the training envisaged under the project.										
(2) Description of beneficiaries within the framework of the project:	<p>The beneficiaries are the fishers and fishing communities in the Nile Sobat ecological zone. They will benefit from having a sustainable resource on which to build their businesses, better prices for their catch and improved economic status. Other benefits accruing to them will be a reduced HIV and AIDS infection rate and recognition of them as co-managers of the fisheries resources.</p> <p>Additional beneficiaries include the fish processors and traders, and consumers of fish, who will benefit from improved fish quality and increased supply.</p>										
2.4 Outcomes, impact and contributions to value added (i.e. economic growth)											
(1) Outcomes and impact:	<ul style="list-style-type: none"> • Improved food security through sustainability of the fish resources • Improved incomes through improved quantity and value of the catch • Improved distribution and availability of fish throughout the country improving nutrition • Reduced HIV infection • Improved economic status of fishing communities • (possibly) reduced conflict between neighbouring fishing communities, and between fishing communities and pastoralists 										
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)										
2.5 Environmental and social impact, and mitigation measures											
(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1" style="width: 100%;"> <tr> <td style="width: 20%;">Negative: a</td> <td>Project:</td> </tr> <tr> <td>Positive: b</td> <td>a: is likely to have minimal or little impact on the environment and/or society</td> </tr> <tr> <td></td> <td>b: may have an impact on the environment and/or society</td> </tr> <tr> <td></td> <td>c: is likely to have a significant impact on the environment and/or society</td> </tr> <tr> <td></td> <td>d: will have a significant impact on the environment and/or society</td> </tr> </table>	Negative: a	Project:	Positive: b	a: is likely to have minimal or little impact on the environment and/or society		b: may have an impact on the environment and/or society		c: is likely to have a significant impact on the environment and/or society		d: will have a significant impact on the environment and/or society
Negative: a	Project:										
Positive: b	a: is likely to have minimal or little impact on the environment and/or society										
	b: may have an impact on the environment and/or society										
	c: is likely to have a significant impact on the environment and/or society										
	d: will have a significant impact on the environment and/or society										
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • The whole of the Sudd in the Nile Sobat ecological zone is a RAMSAR wetland. 5,700,000 ha. The area is the last wild bastion of the shoebill stork, <i>Balaeniceps rex</i>, and also many other species of birds and animals. • Fishing occurs and will continue to occur in the Sudd region. If overfishing occurs due to overexpansion of the fishing effort in the area this could have serious, but unknown ramifications. This will be mitigated against by the application of co-management principles to fisheries management throughout South Sudan. <p>(Positive)</p> <ul style="list-style-type: none"> • The immediate effects of the project will be social, in that the fishing communities would expect a better standard of living from better prices for aquatic products due to the skills and competencies acquired during the training courses. • The sustainability of the stocks of fish remains in doubt, but the project will contribute to sustainability through training in co-management. • The project is gender aware and includes both gender and HIV training and opportunities for youth women. 										
2.6 Monitoring and evaluation for impact measurement											
(1) Measurable indicators and situation at a starting point:	<p>Number of training camps being held</p> <p>Number of residential courses being held</p> <p>Currently zero, and unlikely to be any until start of project</p>										
(2) Measurable indicators and situation at the end point:	<p>Numbers of training camps being held</p> <p>Number of residential courses being held</p> <p>6 camps per year</p> <p>1 residential course</p>										
(3) Methods of measurement and sources of information:	<p>Count of camps and courses held</p> <p>From Padak FTC records, state fisheries administrations records. MLFI records.</p> <p>The project should be assessed by the effects of the training on the communities where the training has been done, not just on the crude figures for numbers of people trained and numbers of courses held.</p>										
(4) Responsible parties for the monitoring and evaluation:	<p>Padak FTC Manager and administration</p> <p>Padak FTC Board of Trustees</p> <p>JG-MUST</p> <p>MLFI annual reports</p>										
2.7 Required human resources											
(1) Principle of human resources management:	Routine training activity undertaken by Padak FTC										

Items	Information
(2) Required human resources in the public sector (Positions, grades and numbers):	<p>Padak Staff Established staff</p> <ul style="list-style-type: none"> • 1 Centre Manager • 1 Assistant Centre Manager • 4 lecturers. Post-harvest. Fishing operations and gear. Fisheries management. Outboard engine maintenance. • 1 Administrative assistant (Accounts and administration) <p>Un-established staff</p> <ul style="list-style-type: none"> • 2 boatmen or fishermen • 2 cleaner • 1 gardener • 6 guards • Labourers etc up to max of 20 <p>Currently there are 5 lecturers and 20 un-established staff.</p>
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	None

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:

M	L: Low	M: Medium	H: High	(select an indicator from the list)
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(2) Explanation of expected risks:

<p>Immediate</p> <ul style="list-style-type: none"> • Weak buy in from MLFI and JG-MUST • Inappropriate criteria for selection of location of training camps by state fisheries administrations • Inaccessibility of the locations for training camps • Flooding during the wet season • Insecurity in some areas of the Nile Sobat, particularly cattle raiding <p>Long term</p> <ul style="list-style-type: none"> • Centre management and staff commitment • Reducing commitment from JG-MUST and MLFI • Insufficient funds allocated by all national and state fisheries administrations, donors and NGOs • HIV in Padak FTC trained teaching staff reduces ability of the institution to deliver training • HIV in fishing communities limits the effectiveness of the training (CAMP has a proposed HIV awareness project)
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2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:

The project cannot start until the Padak FTC has been established, and its staff trained.

2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.

<p>The South Sudan Government would be expected to be the main source of funds to pay for the project activities, although states will also be expected to fund from their development budgets. Additional financial resources from the national government will be required to fund outreach training courses undertaken under the auspices of the national government through MLFI. Other funds will be forthcoming from a variety of sources, the private sector, DP and NGOs and international organizations.</p>

5.4.17 Private sector fisheries and aquaculture technical training project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Fisheries		
(2) Project name:	Private sector fisheries and aquaculture technical training project		
(3) Project ID:	0 4 2 0 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2020/21	Ending FY: 2039/40	Duration (years): 20
(5) Total investment:	SSP 0	USD 0	Note: Not including recurrent cost
(6) Private sector co-finance	SSP (not estimated)	USD (not estimated)	

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FI.SA4	Private sector projects and businesses	Table 2-3
(2) Government organisation:	06	MAR-FA	Directorate of Fisheries and Aquaculture development	Table 2-6
(3) Activity types:	301	PS-PR	Private Sector - Production	Table 2-12
	203	SP-EX	Service delivery - extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	X
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	X
(5) Planning time horizon (start):	01	PH1	Phase I (2015/15-2020/21, 5 years)	
	02	PH2	Phase II (2020/21-2025/26, 5 years)	X
	03	PH3	Phase III (2025/26-2030/31, 5 years)	
	04	PH4	Phase IV (2030/31-2040/41, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	
	04	ISP	Ironstone Plateau	
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	X
(8) Funding sources:	11	NBF	National government budget/development fund	
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	X
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income	X	

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

Capture fisheries in South Sudan currently produces more than 140,000 tonnes per year. All of this is produced by small scale fishermen and sold to traders, either fresh, or sundried/smoked. In peaceful times up to 16,000 tonnes is exported north to Sudan.

In the future the production of fish will increase and should reach the Maximum Sustainable Yield of 200,000 tonnes within 10 years. Effective data collection and management measures will have to be imposed so as to stop the fishery being overfished. At the same time aquaculture is expected to contribute to fish production, incrementally producing up to 70,000 tonnes by 2040.

The private sector is expected to position itself to:

- buy at landing sites and fish farms and transport the product of capture fisheries and aquaculture to the towns where the demand for fish is located. Investment in transport facilities, communications and to cover the costs of stock is needed
- move production from sundried/smoked fish to fresh fish on ice, so as to take advantage of the extra prices that can be obtained for fresh fish. This requires investment in ice production, ice boxes and insulated transport.
- market and process the fish that is bought in for local South Sudan requirements. This requires investment in facilities in the towns for processing fish in hygienic conditions. Value adding will make this profitable, since there is a burgeoning middle class in the towns who are demanding higher quality products and have access to refrigerators.
- market and process the fish that is bought in for the export market. A higher level of hygiene and quality control, the observation of HACCP procedures and oversight from the Competent Authority is needed. Investment in water treatment plant, cold stores, chill stores, blast freezers and additional equipment is also required.

This project covers training of private sector operatives in fish handling and processing, transport of fish, HACCP, Good Manufacturing Practice, (GMP), quality assurance and inspection, which will be necessary for the industry to flourish.

Training will be undertaken by Padak Fisheries Training Centre (Padak FTC), part of the John Garang Memorial University of Science and Technology (JG-MUST) in Bor, or in the large urban centres of Juba or Malakal through outreach courses and training camps. National vocational qualifications (NVQs) will have been developed by the FTC and these will form the basis of the training offered. The private sector will pay for this training.

Additionally it is anticipated that numerous projects will also be started by NGOs and DPs, and the fishermen, processors and fish traders involved will require significant skills training. All of this training will be undertaken on a cost recovery basis by the Padak FTC.

Aquaculture in South Sudan is poised to expand, from a subsistence activity carried out by relatively few small scale farmers in counties around Yei and Yambio, to a multi-faceted industry encompassing subsistence fish farmers, small scale commercial farmers practicing Integrated Agriculture Aquaculture (IAA) techniques and large scale commercial farms.

The Greenbelt Livelihood Zone of South Sudan is ideally situated for aquaculture, having appropriate soils, gravity fed streams and a good climatic profile. It is expected that by 2039 70,000 tonnes per year of fish will be produced by aquaculture in South Sudan. In the future there may be further opportunities for fish farming in irrigation schemes, either fish/rice culture, cage culture in dams, or wide scale ranching in irrigation channels and canals. Hydropower dams also may present further opportunities.

The National Aquaculture Training and Research Centre Project (to be established under another CAMP project) will establish a centre of excellence in aquaculture in the Greenbelt Livelihood Zone (Yei) by 2020. This will serve the aquaculture industry's needs in training and research.

This project seeks to use the National Aquaculture Training and Research Centre to train private sector personnel in commercial aquaculture techniques, including but not limited to feed, site selection, hatchery, nursery and growout, so as to satisfy the commercial industry's demand for skills. It is anticipated that numerous other aquaculture projects will be started by NGOs and DPs, and the farmers and hatchery managers involved will require significant skills training. All of this training will be undertaken on a cost recovery basis by the National Aquaculture Training and Research Centre

Items	Information
(2) Objectives:	<p>The objective is to ensure that the private sector has sufficient trained staff to take advantage of the opportunities offered in capture fisheries, aquaculture and post-harvest during the period to and beyond 2040.</p> <p>The two major training institutions capable of offering appropriate training are the Padak FTC and the National Aquaculture Training and Research Centre. These are expected to be refurbished or built under separate CAMP projects.</p>
(3) Overall description including temporal and spatial extent of project:	<p>The project is part of a series of initiatives proposed under CAMP to assist in the sustainable development of capture fisheries and of aquaculture in South Sudan and to enhance the value of the catch. This will promote economic growth and incomes all along the value chain from producer to consumer.</p> <p>Padak FTC will be offering training in processing and handling which will have been recognised as national vocational qualifications (NVQs). These qualifications will provide individuals with the skills needed to work in a small fish processing plant. Starting with Processing and Handling 1 (PH1), a basic course for operatives, the level of training and understanding increases as they proceed to PH2 and PH3. All students taking PH2 must have successfully passed PH1. All students taking PH3 must have successfully passed PH3.</p> <ul style="list-style-type: none"> • PH1 Processing and Handling 1 (for entrants to the fish processing industry) • PH2 Processing and Handling 2 (for processing line supervisors) • PH3 Processing and Handling 3 (for factory managers and floor managers) • HACCP¹⁷⁵ in fisheries <p>Additional courses offered by Padak FTC relevant to the private sector will include small boat handling, refrigeration and maintenance of outboard engines.</p> <p>The private sector will make all decisions on investment in training for its employees. However, it is likely that in the future the qualifications of those handling fish in processing plants and at landing sites will be specified by regulation; personnel will have to be trained to at least PH1 to handle fish anywhere along the cool chain or in a processing factory. This will be enforced by the Competent Authority under its mandate to assure fish quality both locally and for export.</p> <p>The project is designed to respond to the likely increase in demand for training in aquaculture from the private sector, DPs and NGOs.</p> <p>The National Aquaculture Training and Research Centre to be established at Yei in the green belt will be the flagship aquaculture development and research centre in South Sudan. The centre will be used to provide training in all aspects of aquaculture. The training undertaken by the centre for non-national and state personnel will be done on a cost recovery basis with the commercial companies, DPs or NGOs paying for the courses held. The National Aquaculture Training and Research Centre will also offer national vocational qualifications (NVQs) in a variety of subjects, which will have been developed during the project to establish the centre.</p> <p>It is anticipated that the National Aquaculture Training and Research Centre will offer courses in:</p> <p>NVQs</p> <ul style="list-style-type: none"> • Certificate I in Aquaculture • Certificate II in Aquaculture • Certificate III in Aquaculture • Certificate IV in Aquaculture • HACCP Implementation • Small business management <p>Nationally approved academic course</p> <ul style="list-style-type: none"> • Diploma of Aquaculture (9 months) <p>Other courses as required. (some may be NVQ standard depending on demand)</p> <ul style="list-style-type: none"> • General aquaculture – subsistence • General aquaculture – small scale commercial • General aquaculture – operatives in large scale commercial aquaculture • Hatchery management and algal culture techniques • Spawning techniques - Tilapia, Catfish, <i>Macrobrachium sp</i>, <i>Barbus sp</i> and Nile Carp • Pond management and feeding • Feeding and health of farmed fish

¹⁷⁵ Hazard And Critical Control Point. A proactive quality control system designed to minimise risks in the production of food. Originally designed for the space programme.

Items	Information
(4) Component structure:	<ul style="list-style-type: none"> • Water quality Component 1: Delivery of training courses in capture fisheries Component 2: Delivery of training courses in aquaculture

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1: Delivery of training courses in capture fisheries, and processing and handling</p> <p>Activity 1.1: Staff of NGOs, DPs and the private sector will be trained on a cost recovery basis at the PadaK FTC on an ad-hoc basis dependent on demand</p> <p>Outputs: If all the staff at all the 16 anticipated fish factories were to be trained by 2030, this would mean that at least 256 factory staff would have to pass PH1, 80 would have to also pass PH2 and 32 (two at each plant) would have also to pass PH3 (remembering that having successfully passed PH1 is a pre-requisite to attending PH2, and PH2 is a pre-requisite to attending PH1). At least 4 in each plant will have to undertake a HACCP course, since HACCP is fundamental to the quality control. Refrigeration, outboard courses and other training would be provided as required. Additionally there will be staff turnover at processing plant, usually up to 16%, meaning that courses will have to continue on as routine activities of the PadaK FTC.</p> <p>Component 2: Delivery of training courses in aquaculture</p> <p>Activity 2.1: Staff of NGOs, DPs and the private sector will be trained on a cost recovery basis at the National Aquaculture Training and Research Centre on an ad-hoc basis dependant on demand.</p> <p>Outputs: Trained staff at commercial fish farms, NGO and DP supported fish farms. Trained staff in NGOs and DPs who are responsible for fish farming initiatives. Cash income for the National Aquaculture Training and Research Centre. Numbers will depend on the speed and intensity of the development of aquaculture in South Sudan. Courses run on cost recovery basis at National Aquaculture Training and Research Centre. Estimated number of courses 2020 to 2040.</p> <p>NVQ Certificate 1 aquaculture – 2 per year for 15 participants x 40 = 600 participants</p> <p>NVQ Certificate 2 aquaculture – 1 per year for 15 participants x 20 = 300 participants</p> <p>NVQ Certificate 3 aquaculture – 1 per year for 15 participants x 20 = 300 participants</p> <p>Other courses as required 2 per year for 15 participants x 20 = 300 participants. Each course is 4 weeks. 1500 personnel from the private sector will be trained over the 18 year period under consideration.</p>
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2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	National Aquaculture Training and Research Centre Fisheries Training and Research Centre (PadaK, at Bor)
(2) Description of beneficiaries within the framework of the project:	<ul style="list-style-type: none"> • Commercial fish farms • IAA and subsistence fish farmers • NGOs, DPs • Fish farmers associations and cooperatives • Consumers and exporters of farmed fish (through increased production) • Suppliers to the fish farming industry (feeds, consumables, equipment, etc)

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<p>The aquaculture industry in South Sudan is expected to be producing 70,000 tonnes of fish by 2040. Most of this will come from large scale commercial intensive fish farms and intermediate size farms owned and operated by South Sudanese investors. It is the workers on these farms that will have to be trained and have their skill levels enhanced if the target is to be reached. Initially the staff of these farms will come from outside the country (Egypt, China, Philippines etc) but it is hoped that the foreign staff can be substituted with trained local personnel as time goes by.</p> <p>The capture fishery is expected to have reached the Maximum Sustainable Yield (MSY) of 200,000 tonnes by 2030. To maximise value from this catch is the objective and the processing plants that add value will need trained staff to do this.</p> <p>Generally employment will rise as both aquaculture and post-harvest value adding industries are relatively new to South Sudan (drying fish is the predominant method of preserving fish currently used in South Sudan, and this reduces the value of the fish from that of the fresh product).</p>
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

Items	Information					
2.5 Environmental and social impact, and mitigation measures						
(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td> Negative: a Positive: b </td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: a Positive: b	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society			
Negative: a Positive: b	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society					
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>There are minimal effects on the environment from this activity. In the long term:</p> <p>(Negative)</p> <ul style="list-style-type: none"> Increased exposure to water may lead to increased bilharzia and other occupational diseases among workers in the industry as fish farming expands. <p>(Positive)</p> <ul style="list-style-type: none"> The skills provided to the fish farmers and others attending courses at the National Aquaculture Training and Research Centre will lead to the improvement of fish farming techniques, more fish farms and ultimately yields from fish farming. This will improve the lives of fish farmers through improved incomes, better nutrition and economic activity. All courses will have HIV and AIDS awareness modules and this may lead to lower levels of HIV infection All courses will have gender awareness modules leading to more equality in fish farming communities. 					
2.6 Monitoring and evaluation for impact measurement						
(1) Measurable indicators and situation at a starting point:	<p>No training courses based on a cost recovery system are currently being undertaken (there is no National Aquaculture Training and Research Centre, and the Padak Fisheries Training and Research Centre is not yet operative)</p> <p>Once the National Aquaculture Training and Research Centre and the Padak FTC are operative, training on a cost recovery basis will start.</p>					
(2) Measurable indicators and situation at the end point:	<p>The indicators are:</p> <ul style="list-style-type: none"> the numbers of courses run numbers of personnel trained Income to the Padak FTC (ultimately) production and sustainability of wild fish in South Sudan value of fish marketed locally and exported from South Sudan. income to the National Aquaculture Training and Research Centre (ultimately) production of farmed fish in South Sudan <p>The training programmes should be judged by their impact on aquaculture and capture fisheries, not just by the number of staff and operatives trained.</p> <p>The aquaculture industry in South Sudan is expected to produce 70,000 tonnes of fish by 2040.</p> <p>The capture fisheries are expected to produce 200,000 tonnes of fish annually in a sustainable manner and a value adding industry for local consumption and for export is expected to be established.</p>					
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> Lecturers reports at National Aquaculture Training and Research Centre and Padak FTC National Aquaculture Training and Research Centre and Padak FTC monthly and annual reports National Aquaculture Training and Research Centre and Padak FTC annual accounts For Padak FTC, JG-MUST annual reports DPs and NGOs reports MLFI annual reports 					
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> MLFI Management at National Aquaculture Training and Research Centre Management of Padak FTC 					
2.7 Required human resources						
(1) Principle of human resources management:	<p>Staff at autonomous Training Centres Cost recovery basis, with the private sector, DPs, and NGOs covering the cost of the training.</p>					
(2) Required human resources in the public sector (Positions, grades and numbers):	<p>Existing Aquaculture Centre and Padak FTC staff will undertake the training.</p>					
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>None. The private sector is the target of the training to be offered, and they will make the decisions on requirements as need evidences itself.</p>					
2.8 Risk assessment with respect to project objectives and resources to be applied						
(1) Expected level of risk:	<table border="1"> <tr> <td>M</td> <td>L: Low</td> <td>M: Medium</td> <td>H: High</td> <td>(select an indicator from the list)</td> </tr> </table>	M	L: Low	M: Medium	H: High	(select an indicator from the list)
M	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	<ul style="list-style-type: none"> Institutions cannot deliver appropriate training courses due to mismanagement HIV in the trained cadre of staff at the institutions reduces the numbers of staff and 					

Items	Information
	<p>affects delivery of courses</p> <ul style="list-style-type: none"> • Overfishing reduces fish catches, making value adding and exports a marginal activity due to lack of raw material • Competent Authority is not established, hindering exports and value adding efforts • Private sector, DPs and NGOs not willing to pay for training • Climate change alters the profile in South Sudan reducing fish catches or conditions for aquaculture. • Introductions and transfers alter the aquaculture species assemblage • Disease affects aquaculture negatively • Aquaculture feed problems (quantity, quality, content, availability, cost) • Competition from Asian countries renders aquaculture unprofitable.

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	The importance of establishing the Aquaculture Training and Research Centre and revitalising the Padak FTC cannot be overemphasised.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	This is an ongoing programme and has no end point.
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Part 3: Project cost estimation

(no cost estimated)

5.4.18 Regional fisheries and aquaculture research project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Fisheries		
(2) Project name:	Regional fisheries and aquaculture research projects		
(3) Project ID:	0 4 . 2 1 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2020/21	Ending FY: 2039/40	Duration (years): 20
(5) Total investment:	SSP 0	USD 0	Note: Not including recurrent cost

1.2 Project characteristics:

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FI. SA2	Public sector institution and management capacity development	Table 2-3
(2) Government organisation:	06	MAR-FA	Directorate of Fisheries and Aquaculture Development	Table 2-6
	09	MAR-RD	Directorate of Animal and Fisheries Research and Development	Table 2-6
(3) Activity types:	204	SP-RE	Service delivery/infrastructure development- Research and Experiment	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	X
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	X
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	X
(5) Planning time horizon (start):	01	PH1	Phase I (2015/15-2020/21, 5 years)	
	02	PH2	Phase II (2020/21-2025/26, 5 years)	X
	03	PH3	Phase III (2025/26-2030/31, 5 years)	
	04	PH4	Phase IV (2030/31-2040/41, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	
	04	ISP	Ironstone Plateau	
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	X
(8) Funding sources:	11	NBF	National government budget/development fund	
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	X
52	NGL	NGO loans and equity financing		

Items	Information
61	FGI Financed by generated income

Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

Very little is known about aquaculture and capture fisheries in South Sudan. Since independence of Sudan in 1956 very little research of any sort has been carried out. This has left a huge knowledge gap that is only now being acknowledged and being addressed (CAMP has a research project, for aquaculture and for capture fisheries, covering internally funded research).

The Fisheries Training and Research Centre at Padak in Jonglei (Padak FTC), and the National Aquaculture Training and Research Centre (NATRC) to be established in the Greenbelt will both have facilities that can be used by international organisations, international research institutes and overseas universities as bases for research into fisheries and aquaculture and also to conduct regional training courses.

This activity will enhance knowledge and understanding of fisheries and aquaculture in South Sudan and also contribute to the running costs and upkeep of the Padak FTC and NATRC through the cost recovery basis of the hire of facilities at the two centres.

There is no cost to the national or state governments due to this activity as everything will be paid for by the overseas and international organisations.

(2) Objectives:

The objectives of the regional fisheries and aquaculture research project, is:

- to enhance the understanding of the wild capture fisheries in South Sudan so as to achieve food security, enhance nutrition and promote economic growth through proper management of the fish resources.
- to improve aquaculture production and efficiency so as to increase employment and fish production, so as to stimulate economic growth and provide nutrition.

The objectives of each research programme vary, but they all related to understanding :

- the capture fisheries, biology of fish species, hydrology, fisheries management or responses to fishing effort of the fisheries of the country and
- aquaculture methods, species, and development.

(3) Overall description including temporal and spatial extent of project:

The project is to support research projects in fisheries and aquaculture undertaken by non-South Sudanese universities, research institutions, DPs and NGOs, at either the Padak FTC or the NATRC. These overseas organisations may well be linked or in partnership with South Sudanese academic institutions, but not necessarily.

The project will be ongoing until the end of 2040. Research will be undertaken by South Sudanese academia and technical staff, in collaboration with external researchers from universities, international research organisations and foundations which have an interest in doing research in tropical African countries or on specific topics relevant to sub-Saharan countries.

The Padak FTC will by 2020 be re-furnished, the staff trained and all facilities available for use or hire under the Padak FTC's cost recovery and revenue scheme, which is intended eventually to make the centre self financing.

Similarly the National Aquaculture Training and Research Centre (NATRC) will also be operating, with a large area of fish ponds, algae room, hatchery and laboratory, serving the nation's needs in aquaculture training and research. Its facilities will also be available on a user pays basis for research or training.

The research will contribute to the management and development of capture fisheries and aquaculture in South Sudan and elsewhere in Africa.

Donors might also fund regional training courses at both centres which will significantly raise the profile of South Sudan in fisheries and aquaculture worldwide.

Research will be coordinated by the National Agriculture Research Board

(4) Component structure:

Component 1: Research into capture fisheries and aquaculture

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

Component 1: Research into capture fisheries and aquaculture
Activity 1: Research projects will range from small graduate research projects, which can be undertaken by one graduate on his own working for a post-graduate qualification, to projects involving a whole university department research section. They could be sub-contracted by donors or NGOs to cover intractable regional or national problems in the sector, or be initiated by overseas universities wishing to

Items	Information
	<p>use facilities in tropical Africa for research projects, both under-graduate and post graduate, for their students. These could be with local universities or merely using the Padak FTC and NATRC as a base in Africa. Some of the research could be contracted by the private sector; particularly in aquaculture. There is no formal structure proposed. All projects will be ad-hoc.</p> <p>Outputs: A series of research papers detailing the results of the various research projects. These would be published through regional and international journals. A series of training course reports and conference proceedings, published by the organisers of these events. Research projects conducted by the private sector may be under a confidentiality agreement, so publication of results would be delayed or redacted as appropriate. Enhanced profile of South Sudan fisheries and aquaculture, regionally and internationally.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	Padak FTC National Aquaculture Training and Research Centre Universities, local and international
(2) Description of beneficiaries within the framework of the project:	International researchers NGOs and DPs Private sector Capture fisheries and aquaculture industries of South Sudan

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<p>The project will contribute to economic growth, food supply and food security, through helping to maximise the amount of wild caught fish and aquacultured fish produced in South Sudan.</p> <p>The project should contribute to regional and international understanding of fisheries and aquaculture in Africa</p>
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: a</td> <td>Project: a: is likely to have minimal or little impact on the environment and/or society</td> </tr> <tr> <td>Positive: c</td> <td>b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society</td> </tr> </table>	Negative: a	Project: a: is likely to have minimal or little impact on the environment and/or society	Positive: c	b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: a	Project: a: is likely to have minimal or little impact on the environment and/or society				
Positive: c	b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society				
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>The research in itself will have little impact, environmentally or socially. Activities and topics to be studied depend on funding being available for this type of research.</p> <p>(Negative)</p> <ul style="list-style-type: none"> For large research projects, the research programme itself will have to include an environmental impact assessment (EIA), so as to ensure that there are no negative environmental outcomes expected. <p>(Positive)</p> <ul style="list-style-type: none"> The results of the research will impact on fishers and the community at large by in part assuring the future supplies of wild fish to the country, and for aquaculture, locally, regionally and internationally. This might be in a variety of ways, dependant on the results of the research and it's relevance to the situation in South Sudan. 				

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	Indicator: Research projects carried out Situation at start point: None in progress
(2) Measurable indicators and situation at the end point:	Indicator: Research projects underway or completed Situation at end point: Undefined.
(3) Methods of measurement and sources of information:	Measurement: Numbers of research papers published Sources: University journals, regional research publications, MFLI annual reports. NATRC and Padak FTC annual reports
(4) Responsible parties for the monitoring and evaluation:	NATRC Padak FTC. MLFI The National Agriculture Research Board Funding agents for research programmes – overseas research organisations, regional bodies, private sector, NGOs (particularly conservation orientated) and DPs

2.7 Required human resources

(1) Principle of human resources management:	Graduate and university research
(2) Required human resources in the public sector (Positions, grades and numbers):	Unknown. None provided by the two institutions, Padak FTC and NATRC, except on a cost recovery basis. Graduate and undergraduates from universities may be involved in the research.
(3) Required human resources in	No professional staff

Items	Information
the private sector including consultants (positions, qualification and numbers):	Labour as required

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk	<table border="1"> <thead> <tr> <th>L</th> <th>L: Low</th> <th>M: Medium</th> <th>H: High</th> <th>(select an indicator from the list)</th> </tr> </thead> </table>	L	L: Low	M: Medium	H: High	(select an indicator from the list)
L	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks	<ul style="list-style-type: none"> • Failure to find suitable organisations wishing to undertake research in South Sudan in fisheries and aquaculture is the largest single risk. • Insufficient funding sources • Insufficient suitably qualified graduate and undergraduate researchers available in South Sudan for joint research programmes. • HIV amongst researchers and staff at Padak FTC, the NATRC, JG-MUST and University of Juba reducing the cadre of personnel available for joint research. • General insecurity making South Sudan an unsuitable location for research. 					

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	<p>There are many institutions in fisheries in Africa that have become centres for research or training for international organisations and overseas universities, usually in collaboration with local universities and NGOs, and funded by DPs.</p> <p>Examples include:</p> <ul style="list-style-type: none"> • Malawi: the Worldfish Center established an aquaculture project office at the National Aquaculture Center in Domasi, Malawi, with funding from GIZ. The office now services the Southern Africa Development Community (SADC). It undertakes research in partnership with the Department of Fisheries – Malawi, the University of Malawi, and the Department of Fisheries – Zambia. • An example of the collaboration achieved there is the Malawi Department of Fisheries, the Memorial University of Newfoundland (Canada), the Ministry of Agriculture (Mozambique), and The WorldFish Center working to develop management strategies to improve watershed health and fish productivity in Lake Chilwa. • Tanzania: The base of operations for the Nyanza project in Tanzania is the Tanzania Fisheries Research Institute's (TAFIRI) Kigoma field station. The Nyanza Project is run by the Department of Geosciences at the University of Arizona for the International Decade of East African Lakes, a consortium of research scientists interested in promoting research and training activities connected with the African Great Lakes. The program is financed by the US National Science Foundation with support from the Office of International Sciences and Engineering. • Uganda: The National Aquaculture Research Organisation is (2014) hosting a project called "Hot Fish – Protecting human food security and biodiversity in the face of climate change impacts on inland fisheries". Funded by Conservation International and implemented by in Uganda by Carleton University, Canada • Annually JICA sponsor participants at a training course at the Egyptian International Centre for Agriculture, (EICA), on warm water fish production
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>After each research project is complete, the institutions will be expected to promulgate the results.</p> <p>Fisheries managers and aquaculturalists would use the results to fine tune management of the fisheries and aquaculture in South Sudan; and indeed throughout Africa.</p> <p>The private sector would incorporate the results of any research undertaken into its programme of development.</p>
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Part 3: Project cost estimation

(no cost estimated)

5.4.19 Strengthening of fisheries and aquaculture research project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Fisheries		
(2) Project name:	Strengthening of fisheries and aquaculture research project		
(3) Project ID:	0 4 . 2 2 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2020/21	Ending FY: 2039/40	Duration (years): 20
(5) Total investment:	SSP 14,200,000	USD 3,550,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FI.SA2	Public sector institution and management capacity development	Table 2-3
(2) Government organisation:	06	MAR-FA	Directorate of Fisheries and Aquaculture Development	Table 2-6
(3) Activity types:	204	SP-RE	Service delivery/infrastructure development- Research and Experiment	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	X
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	X
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	
	82	NB	Northern Bahr el Ghazal State	
	83	WB	Western Bahr el Ghazal State	
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	X
(5) Planning time horizon (start):	01	PH1	Phase I (2015/15-2020/21, 5 years)	
	02	PH2	Phase II (2020/21-2025/26, 5 years)	X
	03	PH3	Phase III (2025/26-2030/31, 5 years)	
	04	PH4	Phase IV (2030/31-2040/41, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	
	04	ISP	Ironstone Plateau	
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	X
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>Aquaculture has the potential to transform the economy in the south west of South Sudan, in the Green belt. Here the conditions, hydrology, soils, gravity fed streams, temperature and rainfall patterns are ideal for aquaculture. It is likely that aquaculture in this region will expand rapidly and perhaps 70,000 tonnes of fish will be produced by 2040, 85% of that from medium to large scale commercial intensive fish farms. The balance will be produced by small scale local commercial fish farmers and subsistence ponds in villages, using semi intensive methods.</p> <p>Further north, in the great floodplains of the Toic and swamps of the Sudd, aquaculture does not have such potential, due mainly to the topography of the land (very flat) and seasonal flooding. Similarly, in the pastoral lands to the north west, the rainfall and temperature conditions are not so favourable as in the Green Belt.</p> <p>It may however be possible relatively quickly to develop cage culture in rivers and lakes, and pond culture away from the greenbelt, where permanent water is available. In the future there may be opportunities for fish farming in irrigation schemes, either fish/rice culture, cage culture in dams, or wide scale ranching in irrigation channels and canals. Hydropower dams also may present further opportunities. To maximise the potential it is important that a research capability is developed and research undertaken on aquaculture.</p> <p>South Sudan has a large freshwater fishery based on the Nile Sobat Rivers Livelihood Zone, which encompasses the Sudd, a large swamp and also a 5,700,000 ha RAMSAR site. The fishery is not well enumerated. There is no reliable data on how much fish is caught, what species make up the catch, the biology of the fish that make up the catch, or the processing and destination of the catch. The situation analysis carried out by CAMP in 2013 showed that in South Sudan 1.7 million people depend directly on fisheries for livelihood, food security or income. The fishery produces about 140,000 tonnes per year. The majority of this fish is dried or smoked (55%), whilst the rest is eaten fresh, either in the fishing communities or sent to the nearby towns. The potential sustainable yield from wild fisheries is probably in the order of 200,000 tonnes per year. Consumption of fish in South Sudan is about 17kg per person per year. The numbers of fishermen is around 220,000, most of these subsistence, with possibly 12,000 “commercial” fishermen, though nearly all of the commercial fishermen have alternative sources of income. However all this is based on six months of field work, a brief survey, and analysis of third party data (notably a National Bureau of Statistics survey of 2009).</p> <p>It is vital for future management of the wild resources that research is undertaken to fill in many of the missing gaps in knowledge about South Sudan fisheries, the resources, the biology of the multispecies fishery and threats and opportunities, particularly relating to the dangers of overfishing of the resources, which would have very negative impacts.</p>
(2) Objectives:	<p>This project seeks to initiate research projects into aquaculture and capture fisheries so that:</p> <ul style="list-style-type: none"> • Aquaculture production is increased in the Green Belt; species and methods appropriate to other areas and for irrigation schemes and dams can be developed; and, other identified problems can be addressed. • Wild fish production is managed sustainably through appropriate management measures; threats to the fishery are identified and mitigated against; and, any opportunities seized upon.
(3) Overall description including temporal and spatial extent of project:	<p>The project supports basic research projects at the Padak Fisheries Training Centre (Padak FTC), the National Aquaculture Training and Research Centre, John Garang Memorial University of Science and Technology (JG-MUST) at Bor and Juba University with some experimentation in other parts of the country where considered necessary.</p> <p>Funding for research projects will be awarded under the auspices of the <u>National Agriculture Research Board</u>.</p> <p>The project will be ongoing until the end of 2040, sometimes assisted by external specialists (at no extra cost to the Padak FTC nor the universities concerned).</p> <p>The research will:</p> <ul style="list-style-type: none"> • conduct scientifically sound research to better inform resource managers • collaboratively work with local fishing communities to collect fisheries data • provide rigorous baseline/monitoring data for the evaluation of protected areas

Items	Information
(4) Component structure:	<p>performance</p> <ul style="list-style-type: none"> • better understand the fish stocks and the ecosystems upon which they rely • educate the public about conservation, stewardship and research • address shortcomings in knowledge about aquacultured species • improve efficiency in aquaculture leading to a more economically viable industry • educate fish farmers and other interested parties in aquaculture <p>Over this 20 year period a minimum of 30 research projects in capture fisheries will be undertaken and a minimum of 30 research projects in aquaculture will be undertaken.</p> <p>The National Agriculture Research Board will be responsible for awarding grants for research. For fisheries the board will invite as appropriate, representatives of the FTC, MLFI, JG-MUST, the private sector, fishers, co-management groups, community groups, producer organisations, and others with an interest in research in fisheries to join the board as specialist members when decisions are made on fisheries research.</p> <p>For aquaculture the board will invite as appropriate representatives of the MLFI, universities, the private sector, aquaculture producer organisations, and others with an interest in research in aquaculture to join the board as specialist members when decisions are made on aquaculture research.</p> <p>Research projects will range from small graduate research projects, which can be undertaken by one graduate on his own working for a post-graduate qualification, to ones involving a whole university department research section. The size of the grant given will depend on the topic to be studied and its complexity.</p> <p>Component 1: Research in capture fisheries Component 2: Research in aquaculture</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Research in capture fisheries</p> <p>Activity 1: Representative of the sorts of research topics to be covered by this project are:</p> <ul style="list-style-type: none"> Spawning habits and fecundity of natives species important to fisheries (Gymnarcus niloticus, Heterotus niloticus, Lates niloticus and Oreochromis Niloticus) Gender and youth in capture fisheries in South Sudan Uptake of pesticides and heavy metals in Sudd fish species Community structure of larval fishes from the Sudd/Nile/Sobat Effectiveness of Fisheries Protected Areas (FPAs) in the Nile/Sobat Ecological zone Study on the effect of moon phase and water temperature on spawning in Gymnarchus niloticus/Heterotus niloticus Identification of the relationship between riparian hydrology and plankton abundance in the Sudd and Nile River. Inventory of fish species in the Sobat River/Nile/Sudd/Bahr-el-Ghazal with special reference to threats and conservation measures Flow of matter through trophic levels and biogeochemical cycles in the Sudd ecosystem. Underutilised species of crustacean and molluscs in the Nile river system Pollution and litter in the Nile and their impact on fisheries Fish poisons of South Sudan Assessment of fishing impacts on biodiversity loss, with special reference to threatened species, to formulate management options for their protection Assessment of the effectiveness of fisheries co-management agreements in the Nile Sobat ecological zone Traditional fishing methods of the Sobat river and Akobo Basin Effects of fishing effort on abundance and size of Oreochromis niloticus at Malakal <p>Component 2: Research in aquaculture</p> <p>Activity 2: Representative of the sorts of research topics to be covered by this project are:</p> <ul style="list-style-type: none"> Use of constructed wetlands to scrub aquaculture waste water Production of monosex and triploid tilapia Growth trials on Genetically Improved Farmed Tilapia GIFT tilapia Gender and youth in aquaculture in South Sudan Growth trials on tilapia fed with different available supplements. Application of multi-trophic polyculture (using a variety of species) Mitigation of copepod and flatworm worm infestation on aquaculture species Growth of the giant freshwater prawn, <i>Macrobrachium rosenbergii</i>, <i>Macrobrachium niloticum</i> and <i>Macrobrachium vollehovenii</i> as a cash crop in
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Items	Information
	<p>South Sudan</p> <p>Use of the South African prawn <i>Cherax quadricarinatus</i> as a predator on bilharzia snail hosts</p> <p>Cage culture in the Nile and in lakes</p> <p>Indigenous prawns and crabs of South Sudan as aquaculture species</p> <p>Mitigation of common fish diseases found in South Sudan</p> <p>The biology of new indigenous potential aquaculture species</p> <p>Captive production of fry from potential new indigenous species for aquaculture in South Sudan. Species: <i>Labeo niloticus</i>, <i>Barbus bynni</i>, <i>Heterotus niloticus</i>, <i>Gymnarcus niloticus</i>, <i>Brycinus nurse</i>, and others as appropriate.</p> <p>Growth trials on potential new indigenous species for aquaculture in South Sudan <i>Labeo niloticus</i>, <i>Barbus bynni</i>, <i>Heterotus niloticus</i>, <i>Gymnarcus niloticus</i>, <i>Brycinus nurse</i>, and others as appropriate</p> <p>Feed trials on potential new species for aquaculture in South Sudan</p> <p>Feed trials on crops and slaughterhouse waste</p> <p>Seasonal and environmental effects on aquatic animal health</p> <p>Mitigation measures for occupational diseases of workers in aquaculture in South Sudan (Bilharzia, cutaneous leishmaniasis, sleeping sickness, malaria and buruli ulcer)</p> <p>Algal growth and zooplankton production in nursery ponds (for various species is a nursery requirement)</p> <p>Pond systems for hot northern areas of South Sudan</p> <p>Aquaculture in irrigation schemes.</p> <p>Outputs: A series of research papers detailing the results of the various research projects. These would be published through regional and international journals, or at least promulgated on the MFLI's Aquaculture Centre's and Padak FTC's websites and through the MLFI's newsletters and reports. The body of knowledge gathered by research will inform managers of capture fisheries and aquaculture and guide their decisions on measures to avoid overfishing and maximise yields, improve aquaculture yields, reduce losses in aquaculture and post harvest and generally contribute to the understanding of the fisheries sector in South Sudan.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	Padak FTC, National Aquaculture Centre and University based researchers
(2) Description of beneficiaries within the framework of the project:	<p>Fishers throughout the Nile/Sobat and Bahr-el-Ghazal river systems</p> <p>Aquaculturalists throughout the country</p> <p>Post-harvest processors of the products of fisheries and aquaculture.</p>

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	The research carried out into capture fisheries, aquaculture and post-harvest will serve to improve management of capture fisheries, increase production from aquaculture and increase the value of production from capture fisheries and aquaculture. This will lead to improved nutrition (through higher production and lower post-harvest losses), increased incomes from higher value products and more employment from ensuring the sustainability of the wild resources and increasing aquaculture production.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td> <p>Negative: a</p> <p>Positive: c</p> </td> <td> <p>Project:</p> <p>a: is likely to have minimal or little impact on the environment and/or society</p> <p>b: may have an impact on the environment and/or society</p> <p>c: is likely to have a significant impact on the environment and/or society</p> <p>d: will have a significant impact on the environment and/or society</p> </td> </tr> </table>	<p>Negative: a</p> <p>Positive: c</p>	<p>Project:</p> <p>a: is likely to have minimal or little impact on the environment and/or society</p> <p>b: may have an impact on the environment and/or society</p> <p>c: is likely to have a significant impact on the environment and/or society</p> <p>d: will have a significant impact on the environment and/or society</p>
<p>Negative: a</p> <p>Positive: c</p>	<p>Project:</p> <p>a: is likely to have minimal or little impact on the environment and/or society</p> <p>b: may have an impact on the environment and/or society</p> <p>c: is likely to have a significant impact on the environment and/or society</p> <p>d: will have a significant impact on the environment and/or society</p>		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>The research in itself will have little impact.</p> <p>(Negative)</p> <ul style="list-style-type: none"> It is possible that non-native species might escape from trials; but adherence to a strict no introductions policy should serve to avoid this. <p>(Positive)</p> <ul style="list-style-type: none"> The environmental impact of the National Aquaculture Training and Research Centre is covered by the NATRC establishment project, and the main mitigation measure will be a constructed wetland to scrub all effluent. The results of the research have the potential to have a great impact on fishers and the community at large by in part assuring the future supplies of wild and farmed fish to the country. The research may be very beneficial to the workforce, particularly in aquaculture in that it could include research on occupational diseases and aspects of gender and youth that have not been covered before (particularly as aquaculture is a relatively small and new activity in South Sudan) 		

Items	Information
	<ul style="list-style-type: none"> Until the results of the research are published it is difficult to accurately assess future impact.

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	Indicator: Research projects carried out Situation at start point: None in progress
(2) Measurable indicators and situation at the end point:	Indicator: Research projects underway or completed Situation at end point: At least 60 research projects complete or underway
(3) Methods of measurement and sources of information:	Measurement: Numbers of research papers published Sources: University journals, regional research publications, MFLI annual reports, National Aquaculture Centre and Padak FTC annual reports
(4) Responsible parties for the monitoring and evaluation:	Padak FTC. JG-MUST, University of Juba. National Aquaculture Centre MLFI National Agriculture Research Board. Funding agents for research programmes

2.7 Required human resources

(1) Principle of human resources management:	Graduate and university Research
(2) Required human resources in the public sector (Positions, grades and numbers):	Graduate and/or postgraduate researchers (1 per research programme) x 30 Undergraduate researchers (2 per research programme) x 60 Over 20 years. No more than 5 and 10 at any one time.
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	No professional staff Labour as required

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	M L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	<ul style="list-style-type: none"> Failure to find funding for research is the largest single risk. Insufficient suitably qualified graduate and undergraduate researchers available. HIV amongst researchers and staff at Padak FTC, National Aquaculture Centre, JG-MUST and University of Juba reducing the cadre of personnel available Fishers, fish farmers and fishing communities un-cooperative (due to informal taxation creating distrust between the administration and the people) Failure to publicise the results of the research reducing impact General insecurity.

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	The research grants and scrutiny of research proposals will be part of the brief of the National Agriculture Research Board; who will fund and evaluate proposals.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>After each project is complete, and indeed if results are positive, the institution will be expected to promulgate the results.</p> <p>Fisheries and aquaculture managers would use the results to fine tune development messages and activities and the extension workers would be expected to take the messages to the field.</p>
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5.4.20 States aquaculture training project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Fisheries		
(2) Project name:	States aquaculture training project		
(3) Project ID:	0 4 . 2 3 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2025/26	Ending FY: 2039/40	Duration (years): 15
(5) Total investment:	SSP 2,060,000	USD 515,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FI.SA2	Public sector institution and management capacity development	Table 2-3
(2) Government organisation:	06	MAR-FA	Directorate of Fisheries and Aquaculture Development	Table 2-6
(3) Activity types:	203	SP-EX	Service delivery - extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	X
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	X
(5) Planning time horizon (start):	01	PH1	Phase I (2015/15-2020/21, 5 years)	X
	02	PH2	Phase II (2020/21-2025/26, 5 years)	
	03	PH3	Phase III (2025/26-2030/31, 5 years)	
	04	PH4	Phase IV (2030/31-2040/41, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	
	04	ISP	Ironstone Plateau	
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	X
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	X
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income		

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>Aquaculture in South Sudan is poised to expand, from a subsistence activity carried out by relatively few small scale farmers in counties around Yei and Yambio, to a multi-faceted industry encompassing subsistence fish farmers, small scale commercial farmers practicing Integrated Agriculture (IAA) techniques and large scale commercial farms.</p> <p>The Green Belt of South Sudan is ideally situated for aquaculture, having appropriate soils, gravity fed streams and a good climatic profile. It may be possible in the future to develop cage culture in rivers and lakes, and pond culture away from the greenbelt. In the future there may be opportunities for fish farming in irrigation schemes, either fish/rice culture, cage culture in dams, or wide scale ranching in irrigation channels and canals. Hydropower dams also may present further opportunities.</p> <p>It is expected that by 2039 70,000 tonnes per year of fish will be produced by aquaculture in South Sudan.</p> <p>The National Aquaculture Training and Research Centre Project (a CAMP project) will establish a centre of excellence in aquaculture in the Green Belt (Yei) by 2025. This will serve the aquaculture industry's needs in training and research.</p> <p>The National Aquaculture Training and Research Centre will operate on a cost recovery basis.</p>
(2) Objectives:	<ul style="list-style-type: none"> • Provide training to the states on aquaculture, increasing the level of skill in the states and contributing to its rapid development (thus contributing to employment, earnings, food security and economic growth) • To assist the National Aquaculture Training and Research Centre cash flow by providing income from courses provided on a cost recovery basis.
(3) Overall description including temporal and spatial extent of project:	<p>The project is part of a series of initiatives proposed under CAMP to assist in the rapid development of the aquaculture industry in South Sudan.</p> <p>The National Aquaculture Training and Research Centre to be established at Yei in the Green Belt will be the flagship aquaculture development and research centre in South Sudan. The centre will be used to provide training in all aspects of aquaculture.</p> <p>This project seeks to use the National Aquaculture Training and Research Centre to:</p> <ul style="list-style-type: none"> • train the extension workers in the states in aquaculture so that they can pass on their knowledge to interested subsistence and small scale commercial fish farmers (both existing and prospective). This would cover basic knowledge on feed, site selection, pond digging, hatchery, nursery and growout, so as to enable the extension workers to do their work. The intention is not to make the extension workers into fish farmers, but to give them sufficient knowledge to advise others on some aspects of aquaculture, sufficient for subsistence or small scale farmers. Site selection is particularly important. • train the administration (such as Director Generals of fisheries departments, Directors and planning officers) in the states on the principles of aquaculture so that they have an understanding of the industry and the potential in their states. <p>The training undertaken by the centre for national and state personnel will be done on a cost recovery basis. National and state governments, DPs or NGOs will pay for the courses held.</p>
(4) Component and activity structure:	<p>Component 1: Delivery of training courses.</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>The ground work for the delivery of aquaculture training will already have been done in the project that establishes the National Aquaculture Training and Research Centre. This project will have included construction of the centre, training of the staff of the centre and international TA to develop the activities of the Aquaculture Centre including course materials and curriculums, syllabi, national vocational qualifications (NVQs) and practical works.</p> <p>Component 1: Delivery of training courses Staff of the state administrations and extension workers from the counties will be trained by following 2 different courses at the National Aquaculture Training and Research Centre.</p> <p>Outputs: It is anticipated that:</p> <p style="padding-left: 40px;">at least one extension officer from each climatically suitable county in the country will receive training under this project, roughly 100 persons. These 100 people will follow a broad aquaculture course for 4 weeks, on an annual course for 20 people. Training will be repeated every 5 years, either as update for people who</p>
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Items	Information
	<p>have attended previous courses, or as induction for new extension workers. Over the 15 years of the project 15 courses will be held, and a total of 300 participants will attend courses, though many of these will be extension workers on updating.</p> <p>additionally decision makers in the states will be expected to attend a short course on aquaculture, of 5 days, so that they understand the constraints and opportunities. Director Generals of fisheries departments, planning officers and anyone charged with administering an aquaculture programme are the sort of people expected to benefit from this training. The course would be every 2 years, with 10 participants (one from each state) for 6 years (30 participants in total) and then held every 4 years as an updating and refresher course.</p> <p>(all courses will include a module on awareness of HIV and AIDS, gender in aquaculture and awareness of opportunities for youth)</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	National Aquaculture Training and Research Centre
(2) Description of beneficiaries within the framework of the project:	<ul style="list-style-type: none"> • Extension workers in the counties countrywide • Staff of state administrations • Subsistence and small scale fish farmers • Potential subsistence and small scale fish farmers • Consumers and exporters of farmed fish (through increased production) • Suppliers to the fish farming industry (feeds, consumables, equipment, etc)

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<ul style="list-style-type: none"> • Trained extension workers • Trained staff in state administrations • Better informed subsistence and small scale fish farmers, and potential subsistence and small scale fish farmers • Cash income for the National Aquaculture Training and Research Centre <p>The aquaculture industry in South Sudan is expected to produce 70,000 tonnes of fish by 2040. The extension service in the states will have been trained to contribute to the expansion of aquaculture countrywide.</p> <p>State administrations will be trained so that expectations regarding aquaculture are realistic and attainable.</p>
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: a Positive: b</td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: a Positive: b	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: a Positive: b	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • There are minimal effects on the environment from this training activity <p>(Positive)</p> <ul style="list-style-type: none"> • All courses will include a module on awareness of gender in aquaculture and awareness of opportunities for youth, bringing these neglected areas to the mainstream. • All courses will have HIV awareness modules and this may lead to lower levels of infection in fish farming communities and among the extension workers themselves <p>In the long term the training will enhance subsistence and small scale aquaculture in South Sudan. These types of aquaculture do not have major impacts on the environment, as they are not highly intensive. They do however provide food to subsistence families, provide employment and economic activity.</p>		

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<p>No training courses based on a cost recovery system are currently being undertaken (there is no National Aquaculture Training and Research Centre in 2014)</p> <p>Once the National Aquaculture Training and Research Centre is operative (2019/20) training on a cost recovery basis will start.</p> <p>The indicators are:</p> <ul style="list-style-type: none"> • the numbers of courses run • numbers of personnel trained • income to the National Aquaculture Training and Research Centre • (ultimately) production of farmed fish in South Sudan
(2) Measurable indicators and situation at the end point:	Measurable indicators as above

Items	Information					
	<p>Courses run on cost recovery basis at National Aquaculture Training and Research Centre consisting of:</p> <ul style="list-style-type: none"> • one extension officer from each county in the country will receive training under this project. 300 participants will attend courses, though many of these will be extension workers on updating. • decision makers in the states will be expected to attend a short course on aquaculture, of 5 days, so that they understand the constraints and opportunities in the industry. <p>This over 15 years.</p>					
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> • Lecturers' reports at National Aquaculture Training and Research Centre • National Aquaculture Training and Research Centre monthly and annual reports • National Aquaculture Training and Research Centre annual accounts • States annual aquaculture reports. • DPs and NGOs reports • MLFI annual reports 					
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> • MLFI • Management at National Aquaculture Training and Research Centre 					
2.7 Required human resources						
(1) Principle of human resources management:	Public servants in an semi - autonomous Training Centre					
(2) Required human resources in the public sector (Positions, grades and numbers):	<p>Existing National Aquaculture Training and Research Centre staff will undertake the training.</p> <p>Existing staff in the states will be trained.</p>					
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	None					
2.8 Risk assessment with respect to project objectives and resources to be applied						
(1) Expected level of risk:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; text-align: center;">L</td> <td style="width: 25%; text-align: center;">L: Low</td> <td style="width: 25%; text-align: center;">M: Medium</td> <td style="width: 25%; text-align: center;">H: High</td> <td style="text-align: right;">(select an indicator from the list)</td> </tr> </table>	L	L: Low	M: Medium	H: High	(select an indicator from the list)
L	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	<ul style="list-style-type: none"> • Aquaculture Centre cannot deliver appropriate training courses due to mismanagement • HIV in the trained National Aquaculture Training and Research Centre cadre of staff reduces the numbers and affects delivery of courses • HIV in the state administrations reduces the capability of the extension staff to deliver training or the state administrations to function properly. • National and state governments, DPs and NGOs not willing to pay for training for state staff in aquaculture • Climate change alters the hydrological and lacustrine profile in South Sudan making it unsuitable for aquaculture. • Lethargy from state administrations. 					
2.9 Other special considerations and/or notes						
(1) Other special considerations and/or notes:	<p>In time the National Aquaculture Training and Research Centre will be privatised (2035) and become completely self financing.</p> <p>The courses should continue through national government and state development funding, though necessary modifications will have to be made to curriculums as time passes.</p>					
2.10 Routine operation and required resources after the completion of the project						
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	Human Resource Development officers in the states and in the national government will have to actively seek funding and be aware of the need for aquaculture training in their areas of responsibility.					

5.4.21 States fisheries services capacity development project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Fisheries		
(2) Project name:	States fisheries services capacity development project		
(3) Project ID:	0 4 . 2 4 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2025/26	Ending FY: 2039/40	Duration (years): 15
(5) Total investment:	SSP 8,239,000	USD 2,060,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		FI.SA2	Public sector institution and management capacity development	Table 2-3
(2) Government organisation:	06	MAR-FA	Directorate of Fisheries and Aquaculture Development	Table 2-6
(3) Activity types:	104	ID-IM	Inst Development – implementation and monitoring	Table 2-12
	203	SP-EX	Service delivery - extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	X
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	X
(5) Planning time horizon (start):	01	PH1	Phase I (2015/15-2020/21, 5 years)	X
	02	PH2	Phase II (2020/21-2025/26, 5 years)	
	03	PH3	Phase III (2025/26-2030/31, 5 years)	
	04	PH4	Phase IV (2030/31-2040/41, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	
	04	ISP	Ironstone Plateau	
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	X
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	X
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income		

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>Capture fisheries in South Sudan currently produces more than 140,000 tonnes per year. All of this is produced by small scale fishermen and sold to traders, either fresh, or sundried/smoked. In peaceful times up to 16,000 tonnes is exported north to Sudan.</p> <p>In the future the production of fish will increase and should reach the Maximum Sustainable Yield of 200,000 tonnes within 10 years. Effective data collection and management measures will have to be imposed so as to stop the fishery being overfished. At the same time aquaculture is expected to contribute to fish production, beginning at its present very low level, and incrementally producing more, up to 70,000 tonnes by 2040.</p> <p>Constitutionally and practically the SMARFs and extension services of the 10 state administrations are responsible for many aspects of the fishery and for local aquaculture, including:</p> <ul style="list-style-type: none"> • co-management of the resources with the users of the fish resources. Includes creation of size limits, fishing seasons, gear controls, closed areas and protected zones. • monitoring, control and surveillance (MCS) of fisheries (in conjunction with national government). • inspection of exports and general hygiene at landing sites and during transport of fish • general extension work providing training, advice and information to the capture fisheries and aquaculture industries. • data collection to complement the MCS work, and analysis of this data into a usable form. • monthly and annual reporting, internally and externally. • advising on quarantine and movement of farmed fish, whilst ensuring that there are no introductions of exotic species. • disease monitoring and reporting in aquaculture. • assisting investors • some revenue functions. <p>At the moment the states do very little fisheries development or fisheries management work. Part of this is skills related, partly due to lack of financial resources and equipment and partly due to poor leadership.</p> <p>This project is aimed to improve the skills of the public sector in the states, particularly the extension workers, because if the extension workers have no skills they will not be effective, even if leadership, funds and equipment are available.</p> <p>The project is part of a series of initiatives proposed under CAMP to assist in the sustainable development of capture fisheries and of aquaculture in South Sudan and to enhance the value of the catch; so as to promote economic growth and incomes all along the value chain from producer to consumer.</p>
(2) Objectives:	<ul style="list-style-type: none"> • Provide training to state government staff on fisheries in South Sudan, increasing the level of knowledge of state workers and contributing to the rapid development of the fisheries sector (thus contributing to employment, earnings, food security and economic growth) • Provide training to state extension workers so as they can contribute to better co-management of the resources leading to a sustainable wild fishery in the country. • Provide training to state workers so that they are capable of acting as agents for the Competent Authority for inspection of fish quality at landing sites and markets. • Provide training to Director Generals and Directors in state fisheries administrations so as to improve the management of fisheries departments. • To assist the Padak FTC cash flow by providing income from courses
(3) Overall description including temporal and spatial extent of project:	<p>Padak FTC, once regenerated, will be offering training in a variety of topics covering fisheries and fisheries extension. It is anticipated that the centre will be the premier training centre for fisheries in the country. It will be doing outreach courses in the fishing communities, introducing co-management, fish quality control techniques and basic fish handling; together with small business management and accounting, outboard engine maintenance, use of ice, safety on the river and modules covering occupational health and HIV.</p> <p>One of the courses will be tailored for senior state extension workers. It will have a varied syllabus, containing elements of all the courses above, but also covering communication skills, reporting, group dynamics, and principles of overfishing and fisheries management and last for 2 months.</p>

Items	Information
	<p>A shorter updating course, two weeks, will also be needed to keep the extension workers up to date with developments in the sector. All extension workers should attend an updating course every 4 years, after they have completed the basic extension course.</p> <p>The FTC will also be able to offer a shorter management course for DGs and Directors within the administration. This will be geared towards management of small administrations, and include leadership, reporting, personnel management, government accounting, staff development and public speaking.</p> <p>A shorter course for low level extension workers, those that cannot communicate easily in English or Arabic will be offered, but this will be through outreach courses within communities and be concentrated in those areas where fishing activity is greatest, along the Nile Sobat river. The main target for this course is the communities who will be responsible for co-management of the resources, but the lower level government/extension workers, being part of these communities will benefit from attending. This is covered in another CAMP project.</p> <p>All courses will have a module on HIV prevention and another on gender awareness and issues in fisheries related to gender.</p> <p>It is anticipated that every extension worker in South Sudan working on capture fisheries would have attended the 2 months basic extension course after 7 years.</p> <p>Additionally there will be staff turnover, usually at least 8% in the public service, meaning that courses will have to continue just to train new recruits to fisheries extension, as well as the routine updating courses.</p> <p>In that there are probably more than 140 effective extension workers in South Sudan in capture fisheries and the course will take 20 at a time this course will have to be run 7 times in the first 7 years of operation. Allowing for drop out it would have to be repeated every two years after that.</p> <p>Updating courses will have to be run annually for 20 participants and last two weeks. This training would start 5 years after the first extension worker course had been run.</p> <p>Training for DGs and Directors, the higher level members of the state fisheries workers, would be run annually for 2 weeks for 3 years, and then every 4 years for refresher and drop out coverage. 15 trainees each course.</p>
(4) Component structure:	Component 1: Delivery of training courses

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>The ground work for the delivery of training to state workers will already have been done in the project that re-establishes the Padak Fisheries Training and Research Centre (Padak FTC). This project will have included construction of the centre, training of the staff of the centre and international TA to develop the activities of the FTC including course materials and curriculums, syllabuses, national vocational qualifications (NVQs) and practical works.</p> <p>Component 1: Delivery of training courses</p> <p>Activity 1.1: Staff of the states and extension workers will be trained at the Padak FTC on a cost recovery basis, with the fees for training being provided by national and state governments, and from Development Partners and NGOs where this is available.</p> <p>Outputs: Trained fisheries extension staff in all counties. Implementation of Quality Assurance, co-management of resources, data collection and training for fishers and processors in relevant topics by those extension workers trained by the project.</p> <p>The courses to be run between 2019 and 2040 under this project are:</p> <ul style="list-style-type: none"> • Extension courses x 14 with a total of 280 participants • Updating/refresher courses x 18 with a total of 360 participants • Director generals and directors (includes updating) x 7 with a total of 105 participants <p>It will be necessary to run occasional special courses as needs are identified. Realistically one "special" course will need to be run every 2 years for 20 participants for one week.</p> <ul style="list-style-type: none"> • Special courses x 10 with a total of 200 participants. <p>In all 945 person/courses will be achieved over the 20 year period. Many staff will attend more than one course.</p> <p>Exceptionally some postgraduate courses for senior officers will also be funded under this project</p>
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2.3 Service providers and beneficiaries

Items	Information
(1) Description of service providers within the framework of the project:	Padak FTC
(2) Description of beneficiaries within the framework of the project:	<ul style="list-style-type: none"> • State extension workers and Directorate of Fisheries staff in the states <p>Also through improved training of state staff:</p> <ul style="list-style-type: none"> • fishers • fish traders and transporters • South Sudan fish consumers • consumers and exporters of farmed fish (through improved quality and values)

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<p>The main objective of the fisheries administrations at national and state levels is to manage the capture fisheries of the country in a sustainable manner, achieving maximum sustainable yield without allowing the fishery to become overfished.</p> <p>This is a difficult task, and already some areas of South Sudan are showing the unmistakable signs of overfishing (fishermen complaining about declining catches, reductions in catch, reductions in the size of the fish in the catch, reductions in the size of the mesh in gillnets so as to catch the smaller fish, and social stresses).</p> <p>This training is intended to prepare the fisheries extension services and the SMARFs for their role as managers of the resource, in cooperation with the users of the resource, the fishing communities, the co-managers. Additionally they will also have basic knowledge on fish processing, marketing and handling, so as to be able to advise on maximising the value of the catch post harvest.</p> <p>Through the training to the senior SMARF staff, the comprehension of the role of the states and the extension services will be inculcated to the leadership, who will be in a position where they can provide advice and recommendations on investment, management and other fisheries related topics to the other members of the administration and to investors.</p> <p>Over all the impact will be to maximise value from capture fisheries in South Sudan, through achieving and maintaining MSY and through post harvest improvements.</p>
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: a</td> <td rowspan="2">Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society</td> </tr> <tr> <td>Positive: c</td> </tr> </table>	Negative: a	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society	Positive: c
Negative: a	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society			
Positive: c				
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • There are minimal negative effects on the environment or society from this activity <p>(Positive)</p> <ul style="list-style-type: none"> • All courses will have HIV awareness modules and this may lead to lower levels of infection in the administration. • All courses will contain gender awareness and youth as parts of the curricula. • The training will contribute to the sustainability of the fish resources of South Sudan • The training will lead to better cooperation between different fishing communities, and will enhance incomes and economic activity. 			

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<p>No training courses are currently being undertaken (Padak is not operating in 2014)</p> <p>Once Padak FTC is operative (2019/20) training will start.</p> <p>The indicators are:</p> <ul style="list-style-type: none"> • the numbers of courses run • numbers of personnel trained • income to the Padak FTC • (ultimately) production local and export fish
(2) Measurable indicators and situation at the end point:	<p>Measurable indicators as above</p> <p>Courses to be run between 2019 and 2040 under this project are:</p> <ul style="list-style-type: none"> • Extension courses x 14 with a total of 280 participants • Updating/refresher courses x 18 with a total of 360 participants • DGs and Directors (includes updating) x 7 with a total of 105 participants • Special courses x 10 with a total of 200 participants. <p>In all 945 person/courses will be achieved over the 20 year period. Many staff will attend more than one course.</p>

Items	Information
(3) Methods of measurement and sources of information:	<ul style="list-style-type: none"> • Lecturers' reports at Padak FTC • Padak FTC monthly and annual reports • Padak FTC annual accounts • DPs and NGOs reports • States and MLFI annual reports
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> • MLFI • Management at Padak FTC • JG-MUST

2.7 Required human resources

(1) Principle of human resources management:	Public servants in an semi - autonomous Training Centre
(2) Required human resources in the public sector (Positions, grades and numbers):	Existing Padak FTC staff will undertake the training.
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	None

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	M L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	<ul style="list-style-type: none"> • Padak FTC cannot deliver appropriate training courses due to mismanagement • HIV in the trained Padak FTC cadre of staff reduces the numbers and affects delivery of courses • HIV in state administrations reduces the effectiveness of the training delivered • Overfishing reduces fish catches • National and state governments, DPs and NGOs not willing to pay for training • Funds for training diverted to other uses • Climate change alters the profile in South Sudan reducing fish catches.

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	Both gender equality and youth are important in fisheries, the former because women will be major constituent members of co-management bodies set up for the management of the resources; and the latter as they are the next generation of fishers, and have to be fully educated as to their responsibilities towards common property resource management. It would be hoped that the training will make extension workers much more aware of gender and youth issues in fisheries in South Sudan, and take this into account in their dealings with fishing communities.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	In time the Padak FTC will be privatised (2035) and become completely self financing. This will not affect the training programme.
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6. Institutional Development Subsector

6.1 Investment Planning Space

6.1.2 Investment Planning Space by CAADP Pillar

Subsector CAADP Pillar Project ID Project name	Phase I		Phase II			Phase III			Phase IV					Year	SSP ('000)	USD ('000)	Respon- sibility								
	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28					2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35	2035/36
05 Institutional Development Subsector																									
P2 Pillar 2: Market access																									
05.02 Agricultural business development support project																									
05.05 Legal and regulatory framework enhancement project																									
05.06 Feeder roads and rural markets construction and rehabilitation project																									
P3 Pillar 3: Food supply and hunger																									
05.01 Food security and emergency preparedness project																									
05.03 Support to CAMP/IDMP implementation coordination task team project																									
05.04 CAMP implementing ministries capacity development project																									
05.09 Gender capacity development project																									
P4 Pillar 4: Agricultural research																									
05.07 National agricultural information system development project																									
05.08 National agricultural research, extension and training system project																									
													1,046,020	261,505											
													720,878	180,219											
													8,818	2,204	NS										
													11,380	2,845	NS										
													700,680	175,170	NS/S/SC										
													238,961	59,740											
													11,128	2,782	N										
													3	10,058	2,514	N									
													10	210,984	52,746	NS									
													5	6,792	1,698	N									
													86,182	21,545											
													5	13,061	3,265	N									
													10	73,121	18,280	N									

Public sector project
 Routine work by government
 Private sector project
 Routine work by private sector

Note: N: National government; S: State government; P: private sector
 PPP: Public and private sector partnership

6.1.3 Investment Planning Space by Subsector Area/Programme

Subsector	Subsector area/programme Project ID Project name	Phase												Year	SSP ('000)	USD ('000)	Responsi- bility										
		Phase I			Phase II			Phase III			Phase IV																
		2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38	2038/39	2039/40	
05 Institutional Development Subsector																											
	Policy and legal framework development																										
	05.05 Legal and regulatory framework enhancement project																										
	Public sector institution and management capacity development																										
	05.01 Food security and emergency preparedness project																										
	05.03 Support to CAMP/IDMP implementation coordination task team project																										
	05.04 CAMP implementing ministries capacity development project																										
	05.07 National agricultural information system development project																										
	05.08 National agricultural research, extension and training system project																										
	Public infrastructure development																										
	05.06 Feeder roads and rural markets construction and rehabilitation project																										
	Private sector projects and businesses																										
	05.02 Agricultural business development support project																										
	Environment and social considerations																										
	05.09 Gender capacity development project																										

Note: N: National government; S: State government; P: private sector
PPP: Public and private sector partnership

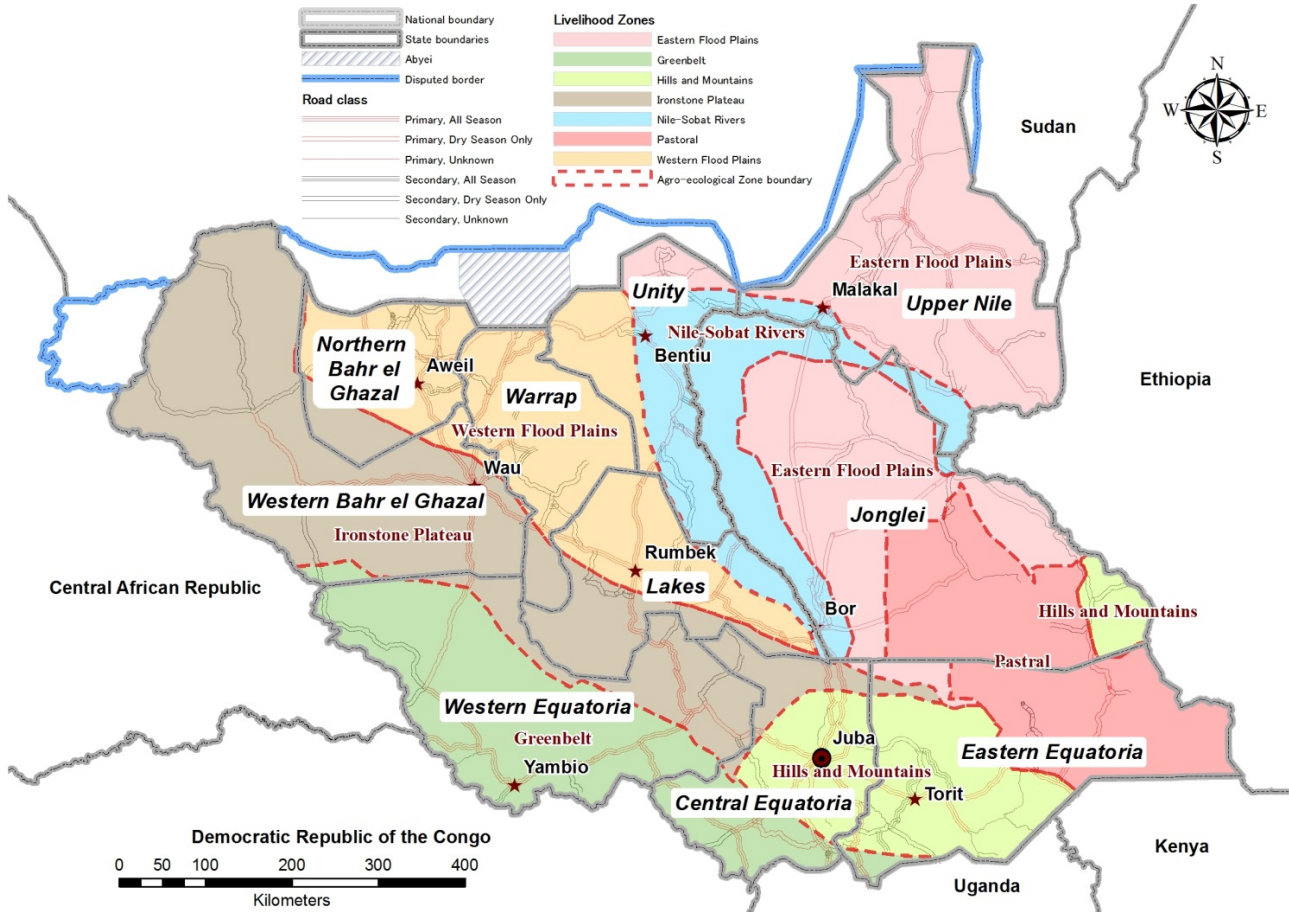
Public sector project
Routine work by government
Private sector project
Routine work by private sector

6.2 Summary of funding requirements

6.4 Project Location Map

Nation-wide Projects

- 05.01 Food security and emergency preparedness project
- 05.02 Agricultural business development support project
- 05.03 Support to CAMP implementation coordination task team project
- 05.04 CAMP implementing ministries capacity development project
- 05.05 Feeder roads and rural markets construction and rehabilitation project
- 05.06 Legal and regulatory framework enhancement project
- 05.07 National agricultural information system development project
- 05.08 National agricultural research, extension and training system project
- 05.09 Gender capacity development project



6.5 Project Profiles

6.5.1 Food security and emergency preparedness project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector	Institutional Development Subsector		
(2) Project name:	Food security and emergency preparedness project		
(3) Project ID:	0 5 0 1 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2015/16	Ending FY: 2024/25	Duration (years): 10
(5) Total investment:	SSP 11,128,000	USD 2,782,000	Note: Not including recurrent cost

1.2 Project characteristics:

	Code	Abbreviation	Description	Reference
(1) Subsector area:		ID.SA2	Public sector institution and management capacity development	Table 2-3
(2) Government organisation :	13	MAF-AE	Directorate of Planning and Agriculture Economics	Table 2-6
	01	MAR-PL	Directorate of Planning	Table 2-6
(3) Activity types :	103	ID-PP	Policy formulation and planning	Table 2-12
	101	ID-LI	Legal and institutional development	Table 2-12

1.3 Project characteristics:

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	X
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	X
	41	PSI	Private sector Investment	X
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>The CAMP situation analysis found in October 2012 that about 40% of the South Sudanese population, or about 4,121,000 people, was at risk from famine or malnutrition, that is, either severely food insecure or moderately food insecure. Such food insecurity is caused by 1) overall national food deficit, 2) border closure with Sudan, 3) large numbers of refugees, returnees, and internally displaced persons (IDPs), 4) inter- and intra-ethnic conflicts, 5) high price of food, and 6) natural hazards such as floods. Especially, according to a report by the Food and Agriculture Organization of the United Nations (FAO) and World Food Programme (WFP)¹⁷⁶, the estimated cereal deficit in 2014 would be 408,548 metric tons. This number has worsened since 2013. South Sudan currently is unable to achieve cereal self-sufficiency. Stable food supplies are only possible when a sufficient amount of food is secured at the macro-level and a fair distribution of food is in place on the micro-level.</p> <p>Other projects developed by the CAMP team will address several issues related to the above topics. For example, the “<u>national agricultural information system development project</u>” and “<u>legal and regulatory framework enhancement project</u>” would assist in formulating a food emergency strategy. Infrastructure construction/ rehabilitation projects that improve roads, rural markets etc. would improve emergency food procurement, food emergency management and proper use of food aid. Quarantine and pest-control development projects would facilitate the safe import of food. Therefore, this project will focus on other issues, especially more effective and efficient food security and emergency preparedness mechanisms which are of high importance in countries such as South Sudan. It will set up mechanisms that will enable the government to better react to a food emergency. More specifically, it is important to 1) formulate a food emergency strategy that will address food security and emergency preparedness, 2) improve emergency food procurement and distribution, 3) improve management of a food emergency, and 4) use food aid properly.</p>
(2) Objectives:	<p>The objective of this project is to mitigate the effects of food insecurity in South Sudan through the establishment of effective and efficient food security and emergency preparedness mechanisms which allow 1) efficient food procurement and distribution, 2) better food emergency management incorporating various information systems, and 3) improved coordination, supervision and operation of food security functions by the South Sudan Food Security Council (SSFSC).</p>
(3) Overall description including temporal and spatial extent of project:	<p>Food security and emergency preparedness in this project consists of 1) emergency food procurement 2) food emergency management and 3) coordination, supervision, and operation of food security functions. Food emergency management includes better management of both emergency food procurement and distribution.</p> <p>1) emergency food procurement It is necessary to decide whether to produce/procure the food domestically or import it from other countries when required. Regarding a domestic source, it is a long-term activity to greatly increase national food production. It would be possible to establish a large scale domestic emergency stockpiling system, such as a national strategic grain reserve. Stockpiling can be expensive, suffer from political interference and there can be large losses due to poor management or infestation.</p> <p>Currently there are no clear policies or laws concerning emergency food procurement (domestic or imported) which would help facilitate its procurement. If food is imported, it may reduce foreign currency reserves and the inflow of cheap food may impede the growth of domestic agriculture and influence domestic food prices. However, it would be more practical and realistic than domestic procurement because the food deficit is large.</p> <p>The projected cereal deficit of 408,548 metric tons in 2014 is caused by South Sudan’s inability to grow enough cereal. In normal conditions, this deficit would be covered by the private sector importing and selling cereal. However, in a food emergency other mechanisms have to be found, such as government purchase of food or food aid. To purchase 408,548 metric tons of cereal from foreign countries, at a cost of approx. 200 USD per ton, will cost approx. 81,700,000 USD. The estimated expenditure of the Ministry of Agriculture, Forestry, Cooperatives and Rural development (MAFCRD) and Agricultural Bank of South Sudan in 2012-2013, including recurrent and development expenditures, was approx. 90,250,000 USD. The National Budget Book 2012-2013 shows budgets related to the purchase of relief food for disaster control and response; for example, the budget for the Directorate of Relief under the South Sudan Relief and Rehabilitation Commission had an approved budget of approx. 564,380 USD in 2012-2013; and the Contingency for Disasters had an approved budget of approx. 3,570,000 USD in 2011-</p>

¹⁷⁶ FAO/ WFP, *Special Report FAO/ WFP Crop And Food Security Assessment Mission To South Sudan* (February 2014), pp.22-26

Items	Information
	<p>2012.</p> <p>These figures are given to show the financial magnitude of the cereal deficit. Currently the government does not have the funds budgeted to meet even a relatively small proportion of the cereal deficit in case of a food emergency. To lessen the dependence on food aid, it is important to establish a realistic food emergency contingency budget and funds and to strengthen the national budget for emergency food procurement. To achieve this, it will be important to develop the capacity of the SSFSC, whose primary responsibility is food security, so as they can manage food emergencies and secure sufficient funds for food security.</p> <p>Meanwhile, given the limited capacity and resources of national and state governments, it is important to promote private sector initiatives and create incentives for small-scale farmers to embark on food production so as to be able to procure emergency food locally. In addition to scaling up social safety nets such as school feeding or food for education programs, WFP's Purchase for Progress (P4P) program is an interesting concept. Its vision is to promote the development of agricultural production and markets in such a way that low income smallholder farmers will produce food surpluses, sell them at a fair price and increase their incomes. WFP has built a number of warehouses close to farmers in South Sudan. Farmers are encouraged and supported to produce above subsistence levels and are then offered the opportunity to bring surplus production to one of the warehouses. P4P is also providing training to minimise post-harvest losses through better storage and management techniques, as well as to develop the organisational and marketing skills of farmers. Warehouses are managed by farmers' organisations (FOs). When farmers bring their produce to the warehouses, they are issued with a receipt indicating the type and quantity of the produce they provide. As soon as WFP has purchased the grain from the warehouses, farmers submit their receipts and receive payment. This P4P model can easily be scaled up. Hence, one of the recommended approaches is for the government to utilize the current existing warehouses under P4P around the country and enhance the scale, that is, to pay warehouses to keep a certain amount in stock and to buy from them in times of emergency. Sales of the food in P4P in South Sudan from 2009 to 2014 were only 1,390 metric tons so this is a long term solution. Although the GRSS should play a leading role in procuring the necessary food, mainly from neighbouring countries, it is important to promote such private sector initiatives.</p> <p>This project will assess the various options discussed (stockpiling, import vs domestic supply etc.). It will look at neighbouring countries' food security arrangements. It will also suggest mechanisms to set up a food emergency contingency fund.</p> <p>2) development of food emergency management Accurate targeting (not too few and not too many beneficiaries, neither too short nor too long duration with correctly composed rations that address nutritional deficiencies) is crucial for proper planning and implementation of emergency food procurement and distribution. Prejudicial targeted food distribution may even be divisive thereby fuelling local conflict. Long-term food aid not only creates dependency and is expensive, it also has a negative impact on local agricultural production and economic development as it forces down the price of staples and other foods provided as food assistance. Kinds of food for procurement and distribution should be decided based on the influence of the domestic market and nutritional levels of citizens. Hence, it is necessary to properly utilize information provided on food insecurity. Currently, the Famine Early Warning System Network (FEWS NET), mainly supported by the US Agency for International Development (USAID), is used in South Sudan and publishes 1) monthly reports on current and project food insecurity, 2) up-to-the minute alerts on emerging or likely crises, 3) specialized reports on weather hazards, crops, market prices, and food assistance. Also, the Agriculture and Food Information System (AFIS), a three year project (2013-2015) implemented by FAO and funded by the European Union (EU), will support the adoption of robust food security information systems at both the national and state levels. This AFIS project will enhance and broaden systems that provide decision makers with food and nutrition security information and data, key building blocks in laying the foundation for agricultural development. Those information systems are important for taking decisions on 1) whether food assistance is needed, 2) how much is needed and what types of food (composition of rations), 3) who needs food assistance, 4) how it will be procured, and 5) how it will be distributed. For better food emergency management, it is necessary to use such information systems. Actual food distribution could make use of other developments by CAMP projects such as the "<u>Feeder roads and rural market construction/ rehabilitation project</u>".</p> <p>3) strengthening of coordination, supervision, and operation mechanism for food security The South Sudan Food Security Council (SSFSC) is the government body responsible for</p>

Items	Information
(4) Component structure:	<p>coordinating resources, supervising, planning and conducting monitoring and evaluation of activities regarding food security. It was established in 2014 under the President of South Sudan. The Ministers of MAFCRD, Ministry of Livestock and Fisheries Industries (MLFI), Ministry of Health, Ministry of Cabinet Affairs, Ministry of Finance and Economic Planning, Ministry of the Office of the President, and Ministry of Wildlife Conservation and Tourism are members of the council. However, in an interview with the Secretary General of SSFSC he mentioned that it does not function well because of the lack of manpower with necessary capacity. AFIS facilitated the establishment of SSFSC. However, it seemed that capacity development of SSFSC itself for proper coordination of resources, supervision, and operation of activities related with food security, including planning, conducting, monitoring and evaluation, is still insufficient. It is necessary to improve their capacity to manage a food emergency.</p> <p>Component 1: Development of emergency food procurement mechanism Component 2: Development of food emergency management mechanism Component 3: Strengthening of coordination, supervision, and operation mechanism for food emergency management</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Development of emergency food procurement mechanism</p> <p>Activity 1.1: Conduct assessment of emergency food procurement; identify and evaluate options (stockpiling, imported versus domestic etc.). Neighbouring countries' experiences will be reviewed. Output: Assessment report with recommendations</p> <p>Activity 1.2: Conduct assessment on how the domestic private sector can produce emergency food. Output: Assessment report that identifies the potential of the domestic private sector to produce emergency food, in particular the P4P model</p> <p>Activity 1.3: Conduct assessment of establishing contingency fund for emergency food procurement. Results from activities 1.1 and 1.2 will be used. Output: Assessment report on viability of setting up a realistic (in size) contingency fund.</p> <p>Activity 1.4: Develop National Food Security and Emergency Preparedness Plan based on Activities 1.1, 1.2 and 1.3. Implement the improvements specified in the Plan. Coordinate relevant ministries and other stakeholders. Establish and operate the funds. Output: More effective and efficient emergency food procurement system with enough funds.</p> <p>Component 2: Development of food emergency management mechanism</p> <p>Activity 2.1: Review how food emergency management is currently done; identify and evaluate various agricultural information systems related to food security, procurement/distribution, accurate targeting for proper food distribution etc. Output: Report that identifies the current gaps and needs of food emergency management and agricultural information systems.</p> <p>Activity 2.2: Implement improvements identified in Activity 2.1. Develop food emergency management procedure manual including operation of related agricultural information systems. Train the related organizations and personnel Output: Better food emergency management. Procedure manual incorporated into National Food Security and Emergency Preparedness Plan</p> <p>Component 3: Strengthening of coordination, supervision, and operation mechanism for food emergency management</p> <p>Activity 3.1: Conduct assessment of capacity of SSFSC and its Secretariat Output: Assessment report that identifies the current gaps and needs on capacity of SSFSC.</p> <p>Activity 3.2: Provide technical and managerial support to SSFSC Outputs: Improved capacity of the members and staff of SSFSC through training</p>
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2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:

<ul style="list-style-type: none"> • The Directorates of Planning in MAFCRD and MLFI will lead the implementation of this project in coordination with other Directorates involved in food security. • SSFSC with training will provide political support to ensure adequate finances are available. • FAO, WFP, USAID, other DPs, NGOs, and South Sudan Relief and Rehabilitation Commission (SSRRC) working and supporting agriculture sector in South Sudan. These agencies will ensure effective coordination among the stakeholders to effectively and efficiently manage information related to food security and make appropriate emergency interventions and avoid duplication of services. • The farmer associations and cooperatives will raise awareness and organise their members so that they participate effectively and efficiently in programs, such as P4P, which will improve emergency food procurement from the domestic private sector
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Items	Information
(2) Description of beneficiaries within the framework of the project:	<ul style="list-style-type: none"> • The IDPs and people affected by conflict, drought and floods will benefit from the project • FAO, WFP, USAID, other DPs, NGOs, and SSRRC will effectively share information that will facilitate decision making. • Subsistence farmers will benefit from this project. • Capacity and function of SSFSC will be developed by this project

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	Food insecurity in South Sudan would be mitigated through the establishment and development of effective and efficient food security and emergency preparedness mechanisms which allow 1) efficient food procurement and distribution, 2) better food emergency management incorporating various information systems, and 3) improved coordination, supervision and operation of food security functions by the SSFSC. Although this project would mainly improve government functions for emergency food procurement and distribution, and food emergency management, the private sector would be also developed to some extent.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: c</td> <td>Project:</td> </tr> <tr> <td>Positive d</td> <td>a: is likely to have minimal or little impact on the environment and/or society</td> </tr> <tr> <td></td> <td>b: may have an impact on the environment and/or society</td> </tr> <tr> <td></td> <td>c: is likely to have a significant impact on the environment and/or society</td> </tr> <tr> <td></td> <td>d: will have a significant impact on the environment and/or society</td> </tr> </table>	Negative: c	Project:	Positive d	a: is likely to have minimal or little impact on the environment and/or society		b: may have an impact on the environment and/or society		c: is likely to have a significant impact on the environment and/or society		d: will have a significant impact on the environment and/or society
Negative: c	Project:										
Positive d	a: is likely to have minimal or little impact on the environment and/or society										
	b: may have an impact on the environment and/or society										
	c: is likely to have a significant impact on the environment and/or society										
	d: will have a significant impact on the environment and/or society										
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative) Inappropriate emergency food procurement from foreign countries may lead to negative impacts:</p> <ul style="list-style-type: none"> • Inflow of cheap food would impede the growth of domestic agriculture and influence domestic food prices • Foreign currency in South Sudan would be depleted • Pests could be brought in with imported agricultural goods if quarantine and pest control systems are inadequate. <p>If domestic emergency stockpiling is used (national strategic grain reserve) some negative impacts, especially for the environment, may occur:</p> <ul style="list-style-type: none"> • For constructing new storage facilities, there would be some impacts on the environment (soil removal, cutting down trees etc.) at the construction sites. • Fumigation of cereals during storage would have an impact if the chemicals were not handled properly and/or contaminated water sources. <p>Emergency food distribution could cause conflict if it is based on ethnicity, gender, age, religion, social and political affiliation of the target communities. Also, if emergency food distribution is not managed well, the disadvantaged members of communities (HIV/AIDS, disabled etc.) would be neglected.</p> <p>(Positive) Appropriate and functional emergency food procurement and distribution will mitigate food insecurity; 40% of the population is at risk.</p>										

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • Current emergency food procurement system • Current government budgets and funds related to food security • Current food emergency strategies/ food security and emergency preparedness plan • Current availability of food from the private sector which could be utilized for emergency food procurement • Current food emergency management system • Current agricultural information system concerning food security • Current capacity of SSFSC
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • Improved emergency food procurement system • Established food emergency contingency fund • Food security and emergency preparedness plan • Private sector contributing to emergency food procurement • Improved food emergency management system • Functional agricultural information system concerning food security • Strengthened capacity of SSFSC on coordination, supervision, and operation
(3) Methods of measurement and sources of information:	Baseline studies for emergency food procurement and food emergency management will be undertaken at the start of the project. At three year intervals project reviews will be undertaken following the same issues as the baseline. The result will be provided to the relevant ministries and DPs.
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> • Directorate of Planning in the MAFCRD/ MLFI • SSFSC

Items	Information					
2.7 Required human resources						
(1) Principle of human resources management:	Competency/ merit-based selection with suitable skills and personality is needed.					
(2) Required human resources in the public sector (Positions, grades and numbers):	Staff of Directorate of Planning in MAFCRD and MLFI will lead the implementation of this project in coordination with other Directorates related to food security. Although capacity of the current staff of SSFSC will be strengthened, it may be advisable to hire one coordinator for emergency food procurement and food emergency management in SSFSC.					
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<ul style="list-style-type: none"> • Organizational development specialist • Agricultural/food security information specialist • Monitoring and evaluation specialist • Members of Farmers Cooperative Associations 					
2.8 Risk assessment with respect to project objectives and resources to be applied						
(1) Expected level of risk:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; text-align: center;">H</td> <td style="width: 25%; text-align: center;">L: Low</td> <td style="width: 25%; text-align: center;">M: Medium</td> <td style="width: 25%; text-align: center;">H: High</td> <td style="text-align: right;">(select an indicator from the list)</td> </tr> </table>	H	L: Low	M: Medium	H: High	(select an indicator from the list)
H	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	The volume of agricultural products for import to South Sudan depends on the conditions in exporting countries; these can vary. Therefore, it is necessary to secure multiple sources for emergency food procurement.					
2.9 Other special considerations and/or notes						
(1) Other special considerations and/or notes:	Global price surge in natural resources and food					
2.10 Routine operation and required resources after the completion of the project						
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<ul style="list-style-type: none"> • National food security and emergency preparedness plan will need periodic updating. • Ongoing requirement for food emergency contingency funds to allow for emergency food procurement and distribution. • SSFSC will need to have input into food security issues so that they can influence policy and strategy, secure funds etc. 					

Part 3: Project cost estimation

Project duration	SSP/USD = 4																											
	Phase 1			Phase 2			Phase 3			Phase 4			Total															
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000	% to total	
1 Management and operation of project	1,490	1,446	1,446	1,446	1,446	806	762	762	762	762	762	762	762	762	762	762	762	762	762	762	762	762	762	762	762	11,128	2,782	100%
1 Deployment of government staff																												
2 Procurement of administrative services (contracted)	1,368	1,368	1,368	1,368	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684	10,260	2,565	92%
3 Procurement of professional services (contracted)	504	504	504	504	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	3,780	945	34%
1 International consultant (organizational development)	504	504	504	504	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	252	3,780	945	34%
2 International consultant (agricultural security information)	360	360	360	360	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	2,700	675	24%
3 International consultant (monitoring and evaluation)	122	78	78	78	78	122	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	868	217	8%
4 Implementation of staff training	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	19	5	0%
1 Stakeholder meetings for procurement mechanism (venue)	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	65	16	1%
2 Stakeholder meetings for procurement mechanism (per diem)	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	72	18	1%
3 Stakeholder meetings for procurement mechanism (transportation)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	19	5	0%
4 Stakeholder meetings for management mechanism (venue)	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	32	8	0%
5 Stakeholder meetings for management mechanism (per diem)	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	36	9	0%
6 Stakeholder meetings for management mechanism (transportation)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	77	19	1%
7 Coordination meetings (venue)	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	259	65	2%
8 Coordination meetings (per diem)	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	288	72	3%
9 Coordination meetings (transportation)																												
5 Implementation of research, studies and surveys																												
6 Delivery of extension and training services to the private sector																												
7 Operation and maintenance																												
2 Construction of infrastructure and procurement of equipment																												
1 Construction of office buildings																												
2 Construction of research, training and other specialized buildings																												
3 Construction of feeder roads																												
4 Construction of production, market and transportation facilities																												
5 Acquisition of land																												
6 Procurement of vehicles																												
7 Procurement of equipment																												
3 Subsidies, equity and loans																												
1 Provision of cash and/or in-kind subsidies																												
2 Provision of training services to the private sector																												
3 Equity investments																												
4 Provision of loans																												
5 Social assistance/donation (Emergency)																												
Total (SSP '000)	1,490	1,446	1,446	1,446	1,446	806	762	762	762	762	762	762	762	762	762	762	762	762	762	762	762	762	762	762	762	11,128	2,782	100%
Total (USD '000)	372	362	362	362	362	201	191	191	191	191	191	191	191	191	191	191	191	191	191	191	191	191	191	191	191	100%		
% to total	13%	13%	13%	13%	13%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	100%		

Public sector project
Routine work by government
Private sector project
Routine work by private sector

6.5.2 Agricultural business development support project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector	Institutional Development		
(2) Project name:	Agricultural business development support project		
(3) Project ID:	0502	01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development	
(4) Start and ending fiscal year:	Starting FY: 2022/23	Ending FY: 2031/32	Duration (years): 10
(5) Total investment:	SSP 8,818,000	USD 2,204,000	Note: Not including recurrent cost

1.2 Project characteristics:

	Code	Abbreviation	Description	Reference
(1) Subsector area:		CR.SA4	Private sector business and projects	Table 2-3
(2) Government organisation:	12	MAF-PE	Directorate of agriculture production and extension service	Table 2-6
	13	MAF-AE	Directorate of Planning and Agriculture Economics	Table 2-6
(3) Activity types:	203	SP-EX	Service delivery/infra. Dev.-Extension and training	Table 2-12
	102	ID-AD	Institutional development-Administrative capacity development	Table 2-12

1.3 Project characteristics:

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	X
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/15-2020/21, 5 years)	
	02	PH2	Phase II (2020/21-2025/26, 5 years)	X
	03	PH3	Phase III (2025/26-2030/31, 5 years)	X
	04	PH4	Phase IV (2030/31-2040/41, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	X
	06	PS	Private sector project	X
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	X
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income		

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>South Sudan is a developing country rich with potential across a wide range of sectors especially agriculture. South Sudan has prime rangeland for grazing livestock, abundant rainfall and fertile soils for growing vegetables, tropical fruits, and crops, large forest plantations, and fresh and dried fish from the Nile and the many other fresh water rivers and lakes. The potential is there for agricultural businesses but in reality businesses are slow to develop due to political instability, rampant corruption, a weak and non-enforced legal framework, land tenure disputes, inconsistent taxation, lack of availability of investment finance, and undeveloped or non-existent electricity grids and road structure.</p> <p>The private sector is the entity that will build, progress, and sustain agriculture in South Sudan. Agricultural business investors need to feel safe (physically and monetarily) when investing money in South Sudanese agriculture. The government of South Sudan is the entity that has to provide that safety net and support. Otherwise South Sudan will remain a country dependent on foreign aid and its people on the constant brink of starvation. Once this safety net is created by the government then donor agencies, financial services companies, and government employees can begin providing business development support across the crop, livestock, forestry, and fisheries agriculture subsectors. Most of this safety net has to begin with the Ministry of Commerce, Industry and Investment and other Ministries within the government responsible for legal, tax, and enforcement frameworks. Once these Ministries have done their job then the Ministry of Agriculture, Forestry, Cooperatives and Rural Development (MAFCRD) and Ministry of Livestock and Fisheries Industries (MLFI) can provide the technical support to agricultural businesses. Inter-ministerial and external coordination is key.</p> <p>To promote private sector investment, the following conditions need to be provided by the national and state governments (list adapted from crop subsector project profile sheet <i>01.33 Private sector investment project</i>):</p> <ul style="list-style-type: none"> • security • political stability • good governance (anti-corruption and no informal/illegal taxation) • firm legal base (business registration, agriculture related laws/regulations, and import/export regulations) • clear and unambiguous labour regulations • competent enforcement of laws • clear land acquisition/lease processes • intellectual property protection • clear dispute resolution processes • functional markets (inputs, outputs and labour) • functional financial institutions • infrastructure development (roads, bridges, electricity, communication and water)
(2) Objectives:	<p>The objective of the project is to provide technical support for newly organised and previously established agri-businesses across all sectors. This support will cover financial and business development services, legal and regulatory framework, and provide mechanisms necessary for coordination between public and private entities.</p>
(3) Overall description including temporal and spatial extent of project:	<p>The project will focus on providing technical support for agri-businesses across all sectors and in all states within South Sudan. It is important to note that in order for this project to be successful, the government must create a safe atmosphere where private investors feel comfortable in investing their money and livelihoods in the agriculture industry. They need to know that a transparent legal and taxation systems are in place. Once this safety net is functioning reasonably well then a combination of government, NGO's, and private sector experts can provide the technical support necessary for agri-businesses to grow. Technical support will be available for small, medium, and large agri-businesses. The anticipated duration of this project is 10 years beginning in fiscal year 2022/23. Starting in 2022 gives the government the necessary time to create an enabling environment for private sector agricultural investment.</p>
(4) Component structure:	<p>Component 1: Support to develop financial services Component 2: Develop business development services (BDS) Component 3: Establish necessary legal and regulatory framework Component 4: Support to establish necessary coordination mechanisms</p>
2.2 Detailed description of project component, activity and outputs	
(1) Component, activity and outputs	<p>Component 1: Support to develop financial services Activity 1.1: A member from each of the following entities will form an implementation committee (can be called Agri-Business Committee for Development of South</p>

Items	Information
	<p>Sudan (ABCD South Sudan)): MAFCRD, MLFI, Ministry of Commerce and Industry, Chamber of Commerce, and interested NGO's/donor agencies. This committee will identify private financial institutions willing to provide support to agri-businesses. This committee would also ensure that these financial services are provided with tax incentives and fair regulatory policy to provide incentives for the private sector to invest in agri-businesses throughout South Sudan.</p> <p>Outputs: List of potential financial institutions identified willing to provide financial support to agri-businesses in South Sudan.</p> <p>Activity1.2: The financial institutions will be assisted by international and national consultants that will work with each entity in providing technical assistance on microcredit, loans, interest rates, types of agricultural businesses that could exist in South Sudan, re-payment schemes based on harvest times, etc. Some innovative lending policies are required, such as:</p> <ul style="list-style-type: none"> the use of modern means, such as biometrics, to identify clients; alternatives to traditional financial analysis, such as cash flows rather than balance sheets; alternatives to traditional forms of collateral, such as involving NGOs and guarantors in "tripartite" arrangements and group lending; developing expertise in agriculture at the level of the credit officers and senior management levels. mobile payment systems using the phone network. well established and fair interest rates and realistic re-payment plans. <p>It is expected that these consultants would be paired with each financial services entity for at least 1 year.</p> <p>Outputs: Financial institutions would have the knowledge on how to offer microcredit and loans to agri-businesses that will both benefit them as a financial service business as well as the agri-business owner.</p> <p>Component 2: Develop business development services (BDS)</p> <p>Activity 2.1: The same committee listed in Component 1 (ABCD South Sudan) will create and facilitate business development service (BDS) for agriculture as one component of agricultural extension services. This BDS consists of the following services for promoting agri-business:</p> <ul style="list-style-type: none"> support for writing business plans in order to obtain financing and loans support for matching private investors with local agri-businesses support for matching financial institutions with agri-businesses advice to agri-businesses on South Sudanese tax law, legal framework, and proper business registration. training on book keeping, accounting, management skills, human resources and labour laws, filing annual tax returns, business law, etc. <p>Outputs: Agri-businesses will have the technical resources necessary to conduct business while obeying South Sudanese law as well as improve their business management skills such as accounting and tax issues.</p> <p>Component 3: Establish necessary legal and regulatory framework</p> <p>Activity 3.1: The same committee listed in Component 1 (ABCD South Sudan) could be given governmental authority to draft comprehensive bills that would be submitted to legislative bodies for adoption into the legislation as regulations or laws; these would need to include:</p> <ul style="list-style-type: none"> transparent tax regulations that provides incentives to agri-businesses and financial institutions willing to loan money to agri-businesses. dispute resolution regulatory laws (what happens if you don't pay your taxes) business registration outlined interest rates land tenure and security depreciation values and other tax deductions created for agricultural buildings, equipment, expenses, etc. budget allocated for agri-business development extension service department <p>Outputs: Safe and favourable environment for agri-businesses to start, expand, and be sustainable in collaboration with other government institutions; creation of government funded technical services for agri-businesses.</p> <p>Component 4: Support to establish necessary coordination mechanisms</p> <p>Activity 4.1: Establish coordination mechanisms with other institutions (e.g. periodical and ad-hoc meetings with Ministry of Commerce and Industry, Land Commission, Chambers of Commerce, Ministry of Transport, Roads and Bridges, Ministry of Electricity, Dams, Irrigation and Water Resources, state governments, research institutions and universities) to promote private sector investment and agri-business support.</p>

Items	Information
	<p>Activity 4.2: Facilitate holding an annual agri-business conference in Juba for awareness raising at national and state government and private sector levels. This agri-business forum which is similar to the USAID sponsored South Sudan Investment Forum held in April, 2013, would last 3 days and would include agri-business owners, government officials, financial institutions and donor agencies. It is estimated that at least 200 people would attend this 3 day forum. The forum would be funded initially through government and donor agency money but would transition with time to a paid registration venue.</p> <p>Outputs: Periodical meetings among related public and private institutions and an agri-business forum organised by ABCD South Sudan</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	Government: Staff of MAFCRD and MLFI, Ministry of Commerce and Industry, Chamber of Commerce, training and research institutes, financial institutions and state governments Private sector: financial institutions, agro-dealers.
(2) Description of beneficiaries within the framework of the project:	Small, medium, and large scale agri-businesses in all private agriculture subsectors.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	Project is expected to contribute to creation of new private sector agri-business investment and expansion of existing agri-businesses which would create significant number of job opportunities for women and youth
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<p>Negative: b Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society</p> <p>Positive: c c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society</p>
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative) The project has potentially negative results if unregulated allocation of land to large scale foreign investors is made. Their demands may create conflicts with local small scale farmers/investors who may also require the same land. Also serious environmental degradation and social disturbances would occur, if environmental and social impacts of agri-business developments are not examined in advance.</p> <p>(Positive) If a legal framework is in place and investors feel comfortable working with the government and financial institutions, then agribusinesses will flourish and will have an enormous positive impact on the future GDP of South Sudan. In addition new jobs would be created across the country and would include women and youth.</p>

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	Number of agri-businesses that exist in South Sudan. Agricultural production (all sectors)
(2) Measurable indicators and situation at the end point:	Number of new agri-businesses registered in South Sudan. Number of job opportunities created by established agri-businesses. Increased agricultural production (all sectors)
(3) Methods of measurement and sources of information:	Data of National Bureau of Statistics and Customs (tax and trading volume), MAFCRD and MLFI monitoring data/information
(4) Responsible parties for the monitoring and evaluation:	MAFCRD and MLFI in collaboration with Ministry of Commerce and Investment and Chambers of Commerce

2.7 Required human resources

(1) Principle of human resources management:	The government does not need to hire additional government staff for having representatives on the ABCD South Sudan. Private sector entities would be involved in this committee on a voluntary basis knowing they are contributing to the future well-being of the country, as the ABCD South Sudan will help to grow their businesses..
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> • Combination of Director, Deputy Director and Staff at national level from Directorate of Agriculture Production and Extension Services, Directorate of Agricultural Education and Training, and Directorate of Cooperative Development in MAFCRD/ Directorate of Livestock and Fishery Extension and Directorate of Investment, Marketing and Supplies in MLFI (Around total 6 staff with a minimum of Bachelor degrees in agri-business) • Agri-business extension services staff at state level (20 total, 2 per state with a minimum of Bachelor degrees in agri-business). • In-charge at Ministry of Commerce and Investment and Chambers of Commerce
(3) Required human resources in the private sector including	International consultants: • Agri-business project management expert (Master degree level or BSc with suitable

Items	Information
consultants (positions, qualification and numbers):	experience) • Financial services expert/ private investment expert (MBA, BSc or BA) • Local consultants for information collection, data compilation, and brochure preparation will be hired.

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	<table border="1"> <tr> <td>M</td> <td>L: Low</td> <td>M: Medium</td> <td>H: High (select an indicator from the list)</td> </tr> </table>	M	L: Low	M: Medium	H: High (select an indicator from the list)
M	L: Low	M: Medium	H: High (select an indicator from the list)		
(2) Explanation of expected risks:	Expected risk level might be medium due to the following reasons. <ul style="list-style-type: none"> • Insecurity of rural areas • Delay of establishment of firm legal framework making business investment attractive • No clear land tenure and acquisition process and illegal land grabbing • Informal and multiple taxation • Corruption of some government officials • Slow processes of business registrations and getting permissions • Unfavourable conditions of access roads to reach investment sites • Irregular electricity supply • Conflicts or tensions among stakeholders, and between stakeholders and non-stakeholders • Gender disparity (negative cultural and customary practices) 				

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	Agri-business development in South Sudan will literally “make or break” agriculture in the country and will be the difference between the country being able to provide for itself or chronically depend on foreign aid.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<ol style="list-style-type: none"> 1. Routine financial services by financial institutions and BDS by MAFCRD and MLFI 2. Periodical and ad-hoc meetings held by ABCD South Sudan 3. Annual agri-business forum held in Juba.
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6.5.3 Support to CAMP/IDMP implementation coordination task team project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Institutional Development Subsector		
(2) Project name:	Support to CAMP/IDMP implementation coordination task team project		
(3) Project ID:	05.03 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2015/16	Ending FY: 2017/18	Duration (years): 3
(5) Total investment:	SSP 10,058,000	USD 2,514,000	Note: Not including recurrent cost

1.2 Project characteristics:

	Code	Abbreviation	Description	Reference
(1) Subsector area:		ID. SA2	Public sector institution and management capacity development	Table 2-3
(2) Government organisation:	01	MAF-AE	Directorate of Planning and Agriculture Economics	Table 2-6
	03	MAR-PL	Directorate of Planning	Table 2-6
(3) Activity types:	102	ID-AD	Administrative Capacity Development	Table 2-12
	104	ID-IM	Implementation and monitoring	Table 2-12

1.3 Project characteristics:

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	X
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	
	72	JG	Jonglei State	
	73	UT	Unity State	
	81	WA	Warrap State	
	82	NB	Northern Bahr el Ghazal State	
	83	WB	Western Bahr el Ghazal State	
	84	LK	Lakes State	
	91	WE	Western Equatoria State	
	92	CE	Central Equatoria State	
	93	EE	Eastern Equatoria State	
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	X
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	
	02	GBT	Greenbelt	
	03	HAM	Hills and Mountains	
	04	ISP	Ironstone Plateau	
	05	NSR	Nile-Sobat Rivers	
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>The Comprehensive Agriculture Master Plan (CAMP) is the 25-year investment plan of the Government of South Sudan to transform the agriculture sector of South Sudan. It incorporates the Comprehensive Africa Agriculture Development Programme (CAADP) objectives. The transformation will lead South Sudan to promote rehabilitation, food security and economic growth, and reduce dependence on its limited oil reserves. CAMP implementation will span the 25-year period starting from fiscal year 2015/16.</p> <p>CAMP will require an implementation mechanism as it includes projects in the crop, livestock, forestry and fisheries subsectors, as well as crosscutting projects in the institutional development subsector. This mechanism should be able to promote, coordinate and facilitate the implementation of the many projects that have been identified through the formulation process.</p>
(2) Objectives:	<p>The objective of the project would be to develop the capacity of the CAMP/IDMP Implementation Coordination Task Team (CAMP/IDMP ICTT) at national level to:</p> <ul style="list-style-type: none"> • promote, coordinate and facilitate the ongoing implementation of CAMP/IDMP-identified projects • ensure an integrated approach to CAMP implementation.
(3) Overall description including temporal and spatial extent of project:	<p>There are 3 implementing ministries: Ministry of Agriculture, Forestry, Cooperatives and Rural Development (MAFCRD), Ministry of Livestock and Fisheries Industries (MLFI), and Ministry of Electricity, Dams, Irrigation and Water Resources (MEDIWR).</p> <p>At the CAMP Technical Committee (TC) Meeting in November 2014, the implementing ministries agreed to set up CAMP/IDMP implementation mechanisms. These mechanisms consist of a set of institutional arrangements involving national, state and local governments, development partners (DPs), the private sector, and civil society. The core mechanisms are: 1) CAMP/IDMP Implementation Coordination Structure (CAMP/IDMP ICS) for decision making and 2) Public Financial Management System (PFMS) for implementation.</p> <p>Intra-ministerial, inter-ministerial and external coordination among the concerned government institutions, DPs, the private sector and civil society are an important factor for effective and efficient decision-making in the CAMP implementation process. CAMP/IDMP ICS will address this.</p> <p>At the TC meeting, the three implementing ministries also decided to establish a special task team, the CAMP/IDMP Implementation Coordination Task Team (CAMP/IDMP ICTT) at national level until the first half of 2015. However, it is anticipated that the life of CAMP/IDMP ICTT will correspond to the 25 year CAMP period. Ideally this project will encompass the first three years of the Plan. CAMP/IDMP ICTT will fit within existing government structures to increase its sustainability past the first three years. Offices will be within ministry structures and the members will be current employees of the implementing ministries. It will promote, coordinate and facilitate CAMP implementation. As part of CAMP/IDMP ICS it will facilitate intra-ministerial, inter-ministerial and external coordination for effective and efficient decision-making in CAMP implementation. In the future, it is expected to establish similar implementation coordination structures at state and county level. A schematic description of CAMP/IDMP ICS is shown in Attachment 1.</p> <p>Members of the Inter-Ministerial Steering Committee (ISC) at national level are the ministers of the implementing and stakeholder ministries such as finance, environment, etc. It is the highest decision-making body for CAMP Implementation. It provides political support, approves budgets and presents recommendations to the Council of Ministers.</p> <p>Members of the Technical Committee (TC) at national level are principally the undersecretaries of the implementing and stakeholder ministries. It supervises the work of CAMP/IDMP ICTT and gives technical and strategic advice. It monitors the progress of CAMP implementation and provides feedback. It reviews and submits budgets to the ISC.</p> <p>The primary responsibilities of CAMP/IDMP ICTT at national level would be to:</p> <ul style="list-style-type: none"> • be the focal point for matters related with CAMP • support implementing directorates and authorities to conduct proper project implementation management consisting of operational management, financial management and human resource management by utilizing various management tools • liaise with other ministries and authorities at national, state and county government level • promote CAMP projects to investors and liaise with and coordinate investors • advise on the adjustment of CAMP objectives, framework and investment priorities, and

(4) Component structure:

<p>track CAMP outcomes and impacts</p> <ul style="list-style-type: none"> • organize and facilitate periodic and ad-hoc meetings of the implementing directorates and authorities, TC, IMSC and other stakeholders • be the repository for CAMP knowledge products • conduct publicity activities related to CAMP
<p>Component 1: Capacity assessment and development of CAMP/IDMP ICTT at national level;</p> <p>Component 2: Successful CAMP implementation at national level;</p> <p>Component 3: Support for meeting arrangement to facilitate intra-ministerial, inter-ministerial and external coordination at national level and</p> <p>Component 4: Support for periodic adjustment of CAMP objectives, framework and investment priorities, and reviews of outcomes and impacts on a multi-year basis</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

<p>Component 1: Capacity assessment and development of CAMP/IDMP ICTT at national level</p> <p>Activity 1.1: Conduct assessment of the current situation of CAMP/IDMP ICTT members. Identify gaps in CAMP/IDMP ICTT and propose actions for improvement. <i>Output:</i> Assessment report that identifies gaps in CAMP/IDMP ICTT's capacity with proposed solutions.</p> <p>Activity 1.2: Implement the actions for improvement identified in Activity 1.1 such as; amendment of TORs of CAMP/IDMP ICTT and job descriptions of the staff members; training of members to develop their management and operational skills, and project management skills development of implementation management tools and sub-tools which will be utilised in CAMP implementation mechanisms; training on government tools such as Annual Work Plan and Budget (AWPB), M&E guidelines and formats, accounting and procurement guidelines and formats, formats of monthly, quarterly and annual reports, etc.;</p> <p><i>Output:</i> CAMP/IDMP ICTT more effective and able to implement the core mechanisms for CAMP implementation (CAMP/IDMP ICS and PFMS)</p> <p>Component 2: Successful CAMP implementation at national level</p> <p>The CAMP/IDMP ICTT at national level will promote, coordinate and facilitate CAMP implementation</p> <p>Activity 2.1: Guide and coordinate the three implementing ministries including supervision and training of the implementing Directorates and authorities on how to manage their various implementation tools (as described in Activity 1.2) <i>Output:</i> Implementing ministries capable of CAMP implementation</p> <p>Activity 2.2: Establish CAMP-related information and documents management system. <i>Output:</i> repository for CAMP knowledge products</p> <p>Activity 2.3: Ensure integrated approach to CAMP implementation (overall project management). On an ongoing basis advise on the adjustment of CAMP objectives, framework and investment priorities, and track CAMP outcomes and impact. Advise on potential collaborations between different CAMP projects to avoid duplication and maximise use of resources. <i>Output:</i> CAMP implementation that maximises use of resources and executes projects with maximum impact.</p> <p>Activity 2.4 Liaise with investors (development partners, such as donors, NGOs, private sector companies). The CAMP/IDMP ICTT would be the entry point for an investor seeking opportunities in the agricultural sector. It would advise the investor of the CAMP framework of projects. Projects would be approved by the TC/ISC. In theory no projects would be approved that were outside of the CAMP framework. <i>Output:</i> Development of a sector-wide approach to funding of development projects in the agriculture sector. Integrated approach to project selection.</p> <p>Activity 2.5: Improve the use of operational, financial and human resource management instruments <i>Output:</i> Implementing ministries using standard tools</p> <p>Activity 2.6: Promote information exchange at state and county level. CAMP/IDMP ICTT will assist at state and county level as requested by implementing Directorates and authorities. <i>Output:</i> Improved capacity at state and county levels and better integration at this level</p> <p>Component 3: Support for meeting arrangements to facilitate intra-ministerial, inter-ministerial and external coordination at national level</p> <p>Activity 3.1: Support to hold periodic and ad-hoc meetings within CAMP/IDMP ICTT <i>Output:</i> CAMP/IDMP ICTT staff can plan and execute with proper information sharing through periodic and ad-hoc meetings</p>
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<p>Activity 3.2: Support to hold periodic and ad-hoc meetings with implementing Directorates and authorities <i>Output:</i> CAMP/IDMP ICTT and implementing Directorates and authorities can communicate and share information related to CAMP implementation through periodic and ad-hoc meetings.</p> <p>Activity 3.3: Support to hold periodic and ad-hoc Technical Committee (TC) meetings 30 participants are estimated per meeting and it will normally be held in Juba quarterly. <i>Output:</i> Periodic and ad-hoc meetings are held in an appropriate manner. Technical and strategic advice provided. Feedback provided on the progress of CAMP implementation. Key decisions made and used in other coordination meetings.</p> <p>Activity 3.4: Support to hold periodic and ad-hoc Inter-Ministerial Steering Committee meetings 30 participants are estimated per meeting and it will normally be held in Juba twice a year. <i>Output:</i> Periodic and ad-hoc meetings are held in an appropriate manner. Confirmation of CAMP implementation process at the political level. Decisions utilised in other coordination meetings.</p> <p>Activity 3.5: Support to hold periodic and ad-hoc state stakeholder meetings 60 participants are estimated per meeting and it will normally be held in Juba twice a year. <i>Output:</i> Periodic and ad-hoc meetings are held in an appropriate manner. Feedback from state stakeholders. State stakeholders are updated on CAMP implementation progress.</p> <p>Activity 3.6: Support to hold periodic and ad-hoc stakeholder meetings 250 participants are estimated per meeting and it will be held in Juba once a year. <i>Output:</i> Periodic and ad-hoc meetings are held in an appropriate manner. Feedback from stakeholders. Stakeholders are updated on CAMP implementation progress.</p> <p>Component 4: Support for periodic adjustment of CAMP objectives, framework and investment priorities, and reviews of outcomes and impacts on a multi-year basis</p> <p>Activity 4.1: Support to conduct periodic adjustment of CAMP objectives, framework and investment priorities, and reviews of outcomes and Impacts 60 participants are estimated per meeting and it will be held in Juba every three years. <i>Output:</i> CAMP objectives, framework and investment priorities adjusted appropriately. Outcomes and impacts known.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	Local, regional and international consultants providing technical assistance and training to CAMP/IDMP ICTT staff.
(2) Description of beneficiaries within the framework of the project:	Immediate beneficiaries are the government officers in CAMP/IDMP ICTT. Secondary beneficiaries are national, state and local governments, DPs, the private sector, and civil society which are involved in CAMP implementation. Long term with a successful CAMP implementation, the indirect beneficiaries are the farmers and population of South Sudan

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	The CAMP/IDMP ICS for decision making will function effectively and efficiently. It is a core mechanism of CAMP implementation which will allow agricultural projects to be properly implemented.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: a</td> <td>Project:</td> </tr> <tr> <td>Positive: d</td> <td>a: is likely to have minimal or little impact on the environment and/or society</td> </tr> <tr> <td></td> <td>b: may have an impact on the environment and/or society</td> </tr> <tr> <td></td> <td>c: is likely to have a significant impact on the environment and/or society</td> </tr> <tr> <td></td> <td>d: will have a significant impact on the environment and/or society</td> </tr> </table>	Negative: a	Project:	Positive: d	a: is likely to have minimal or little impact on the environment and/or society		b: may have an impact on the environment and/or society		c: is likely to have a significant impact on the environment and/or society		d: will have a significant impact on the environment and/or society
Negative: a	Project:										
Positive: d	a: is likely to have minimal or little impact on the environment and/or society										
	b: may have an impact on the environment and/or society										
	c: is likely to have a significant impact on the environment and/or society										
	d: will have a significant impact on the environment and/or society										
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	(Positive) Regarding its social impact, the project is a key component to promote CAMP/IDMP ICS for decision making and to drive the transformation of the agricultural sector in South Sudan. CAMP/IDMP ICTT promotes, coordinates, monitors and facilitates the implementation of a large number of investment projects. By supporting CAMP/IDMP ICTT, the South Sudanese people will experience food security and economic growth independently of reduced oil revenues.										

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and	CAMP/IDMP ICTT at national level is not established as of late 2014. However, it is
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situation at a starting point:	estimated that the capacity of potential members of CAMP/IDMP ICTT to perform their responsibilities will be low. Indicators would include: <ol style="list-style-type: none"> 1. the level of team capacity; 2. the level of staff knowledge and skills for management;
(2) Measurable indicators and situation at the end point:	By the end of the project the capacity of CAMP/IDMP ICTT will be developed so that they can perform all the responsibilities expected and to the satisfaction of the agricultural sector stakeholders. The indicators would be: <ol style="list-style-type: none"> 1. the level of team capacity; 2. the level of staff knowledge and skills for management; 3. number of staff trained; and 4. the level of satisfaction of project stakeholders
(3) Methods of measurement and sources of information:	A baseline study in the form of team assessment will be undertaken at the start of the project. Periodically, project reviews will be undertaken following the same issues as the baseline. The sources of information will be the ministries' implementing Directorates and Authorities and other stakeholders.
(4) Responsible parties for the monitoring and evaluation:	The planning directorates and development partners will carry out the periodic project reviews.

2.7 Required human resources

(1) Principle of human resources management:	As per CAMP framework and CAMP implementation mechanism
(2) Required human resources in the public sector (Positions, grades and numbers):	CAMP/IDMP ICTT staff at national level will consist of several government officers: <ul style="list-style-type: none"> • a CAMP/IDMP ICTT leader • a deputy CAMP/IDMP ICTT leader • three administrative staff members • a secretary The three CAMP implementing ministries will be responsible to deploy such CAMP/IDMP ICTT staff. Implementing Directorates and Authorities responsible for the project implementation alongside DPs will provide additional support as necessary. Especially, MAFCRD's Directorate of Planning and Agricultural Economics and MLFI's Directorate of Planning will be involved in the monitoring and evaluation of the project. The corresponding Directorates at MEDIWR will also be involved.
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	Four consultants will be required to carry out technical assistance and/or training for the CAMP/IDMP ICTT staff: <ul style="list-style-type: none"> • 2 consultants such as institutional development specialist, donor coordination specialist, etc.- 8 M/M year • 2 consultants such as knowledge management specialist, monitoring and evaluation specialist - 4M/M year

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk	L L: Low M: Medium H: High (select an indicator from the list)
(2) Explanation of expected risks:	Establishment of the CAMP/IDMP ICTT at national level was approved at the TC meeting in November 2014. The CAMP/IDMP ICTT should be established until the first half of 2015 with appropriate human resources and budget for launching implementation. It is probable that some support will be required for the duration of CAMP implementation. Continued commitment, political and financial by the government and donors, is necessary. The ongoing conflict will not allow projects to be implemented. Level of capacity at all levels of government Perceived incompetence and corruption at all levels of government will not allow CAMP/IDMP ICTT to operate in an effective and efficient manner.

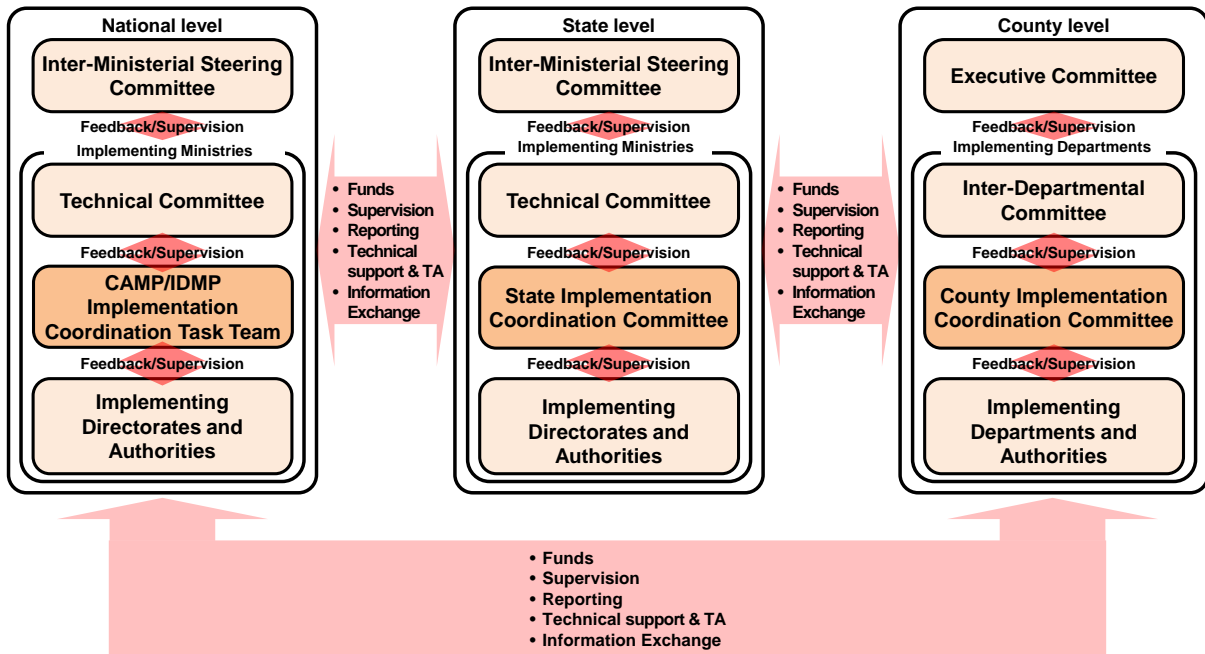
2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	Gender considerations would be mainstreamed in the project components and throughout the project cycle. Special attention would be paid to ensuring equal/equitable participation, contribution and benefit by both men and women at all levels of the project. Project reporting, monitoring and evaluation would include production of gender disaggregated data, as well as gender specific results.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	It will require little additional resources for the government to continue with CAMP/IDMP ICTT's activities at the completion of the project, other than to ensure budget allocations for office operations, meetings and monitoring and evaluation of CAMP implementation. CAMP/IDMP ICTT should be incorporated into the implementing ministries.
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Attachment 1: A schematic description of CAMP/IDMP Implementation Coordination Structure (CAMP/IDMP ICS)



6.5.4 CAMP implementing ministries capacity development project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Institutional Development		
(2) Project name:	CAMP implementing ministries capacity development project		
(3) Project ID:	05.04 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2015/16	Ending FY: 2024/25	Duration (years): 10
(5) Total investment:	SSP 210,984,000	USD 52,746,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		ID.SA2	Public sector institution and management capacity development	Table 2-3
(2) Government organisation:	01	MAF-AF	Directorate of Administration and Finance	Table 2-6
	03	MAR-AD	Directorate of Administration, Finance and Human Resources Development	Table 2-6
(3) Activity types:	102	ID-AD	Administrative Capacity Development	Table 2-12
	210	SP-SI	Social Infrastructure Development	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	X
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	X
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
52	NGL	NGO loans and equity financing		

Items	Information
61	FGI Financed by generated income

Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

The CAMP situation analysis described the lack of capacity in organizational systems, human resources and infrastructure that the agricultural sector in South Sudan is currently experiencing. It further stated that the three CAMP implementing ministries: Ministry of Agriculture, Forestry, Cooperatives and Rural Development (MAFCRD), Ministry of Livestock and Fisheries Industries (MLFI), and Ministry of Electricity, Dams, Irrigation and Water Resources (MEDIWR) are unable to deliver the services required to support the implementation of CAMP and that a strong public sector is needed to provide the enabling environment for the sector stakeholders to thrive.

The following definition of capacity development will guide this project:

- Organizational development (OD) is directed at the organization to develop its capacity to organize and manage groups of individuals to deliver its mission and serve its clients. This change management activity can include the development of goals and mission statements, strategic plans, organizational structures, financial systems, orientation to clients, business processes, Information Technology (IT) / Management Information System (MIS), the external environment or context the organization functions within, etc.
- Human resources development (HRD) is directed at the individual or groups of individuals to develop their capacity to carry out their job functions in an appropriate manner and towards the achievement of organizational goals. This activity often takes the form of experiential learning in all its modalities, e.g., formal classroom training, mentoring, on-the-job training, study tours, etc.
- Infrastructure development refers to the necessary construction and/or equipment required in order for the organization and its people to function successfully.

If any one of the three components is insufficiently developed, then the implementing ministries and their staff will not be able to achieve CAMP's objectives in an efficient and effective manner.

(2) Objectives:

The objective of this project will be to ensure that the Government of the Republic of South Sudan has the capacity to deliver the quality of services to stakeholders in the agriculture sector that they require. This will be done by improving the ministries' organizational effectiveness and efficiency of their internal systems and sub-systems of operation.

(3) Overall description including temporal and spatial extent of project:

The project would be delivered in each of the three CAMP implementing ministries and involve all three aspects of capacity development: organizational development, human resources development, and infrastructure development. The Comprehensive Agriculture Master Plan and the Irrigation Development Master Plan Situation Analyses outlined the condition and capabilities of the three CAMP Implementing ministries, at all levels, national, state, local (county and payam). Ministries in this document means national, state and local. From the situation analyses, it was found that the three CAMP implementing ministries were in need of considerable capacity development in order to deliver the expected services to the people of South Sudan. In addition, the Government of South Sudan is undertaking a government-wide civil service reform program, as well as implementing its decentralization policy, both of which the project would conform to.

(4) Component structure:

- Component 1: Organizational development;
- Component 2: Human resources development; and
- Component 3: Infrastructure development

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:

Project activities would be for each ministry and at all levels, i.e., national, state and local government:

Component 1: Organizational development

Activity 1.1: Conduct organizational assessment of the current situation that takes into account the government's civil service reform program and decentralization policy. Identify gaps in the ministries organizational capacity and propose improvements.

Output: Assessment report that identifies gaps in the ministries organizational capacity with proposed solutions.

Activity 1.2: Implement the improvements identified in Activity 1.1. Examples may be: organizational change; enhancement of the plan-do-check-act (PDCA) cycle; development of Public Financial Management (PFM) system; strengthening of internal and external audit system; improvement of the current human resources systems (appropriate job descriptions, staff recruitment, retirement and performance evaluation); development of intra and inter-communication systems and filing systems.

Output: Ministries more efficiently organized and better able to deliver needed

Items	Information
	<p>services.</p> <p>Component 2: Human resources development</p> <p>Activity 2.1: Conduct human resources assessment of the current situation. Identify types of training needed by different officers (current, new etc.), preliminary list: Generic: a) Introductory training: professional conduct of public officers (or code of conduct), ethics, what is public service, organization of the ministry and its procedures and policies etc. b) Functional skills: writing reports, making a presentation, facilitating meetings, project management etc. c) Administrative skills: information and communication technology, budget and financial management, supervision/management, leadership etc. • Technical training related to individual's job speciality.</p> <p>Identify suppliers of training: for generic, probably Ministry of Labour, Public Service and Human Resource Development, the Public Service Commission; for technical, the subsectors in the implementing ministries. Some training for new officers will be in-house.</p> <p>Output: Training needs defined for different officers and methods to deliver it in place.</p> <p>Activity 2.2: Establish training units to administer comprehensive ministry training plans and coordinate with other ministries such as Ministry of Labour, Public Service and Human Resource Development, the Public Service Commission, and with the agricultural subsectors' training programs. Output: Organizational structure in place to provide quality training.</p> <p>Activity 2.3: Develop comprehensive training plans for each officer, taking into account their job description and actual duties, educational and job history, previous training, performance evaluations and ministry goals etc. Output: Training plan for each officer including the generic and technical skills identified in Activity 2.1.</p> <p>Activity 2.4: Based on the training plans developed in activity 2.3, deliver generic and technical skills training for current officers. Methods of delivery were identified in activity 2.1. Output: in-service training and professional development for 300 current officers provided annually.</p> <p>Activity 2.5: Develop an annual induction program for 50 new employees, consisting of the generic and technical skills identified in Activity 2.1 and delivered by suppliers also identified. Output: New employees are able to be productive immediately.</p> <p>Activity 2.6: Annually provide 10 scholarships to selected officers for graduate programs inside and outside South Sudan. Selection will be based on: the officer's job description and past performance evaluation; and, ministry goals. Output: Key staff educated to graduate level in their speciality.</p> <p>Component 3: Infrastructure Development</p> <p>Activity 3.1: Conduct assessment of ministries' infrastructure with emphasis on state and local government. Identify buildings that need to be constructed or renovated; identify furniture, office equipment and vehicles needed. Output: Infrastructure needs identified and a plan to rectify the gaps.</p> <p>Activity 3.2: Prepare for building/renovation at identified sites including: Selecting appropriate sites and confirm ownership, particularly in the local government areas Community consultations Generic design commissioned for new constructions according to type Transparent selection of designers/contractors (tendering) Civil works (water, power, sewage etc.) Output: Contracts in place to construct/renovate buildings</p> <p>Activity 3.3: Supervise construct and/or renovation of buildings by contractors Output: 89 office buildings constructed and/or renovated, 10 at state level and 79 (current number of counties) at county level</p> <p>Activity 3.4: Procure and distribute office furniture and equipment for ministries offices Output: office furniture and equipment provided for 120 offices: 21 at national level, 20 at state level, and 79 at county level</p> <p>Activity 3.5: Procure and distribute vehicles for ministries Output: 120 vehicles provided, 21 at the national level, 20 at state level, and 79 at county level</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:

<p>Local, regional and international consultants providing technical assistance and training. Local engineering and construction companies. Local suppliers of office furniture and equipment</p>

Items	Information										
(2) Description of beneficiaries within the framework of the project:	Immediate beneficiaries are the government officers providing services to the public. Secondary beneficiaries are the members of the public who will receive improved services.										
2.4 Outcomes, impact and contributions to value added (i.e. economic growth)											
(1) Outcomes and impact:	MAFCRD, MLFI and MEDIWR will deliver the expected services to the people of South Sudan. MAFCRD, MLFI, and MEDIWR are effectively utilizing: <ul style="list-style-type: none"> • enhanced organizational systems; • enhanced HRD systems and training staff at all levels; and • new and/or refurbished and equipped offices to deliver services. These apply to all levels of government (national, state and local)										
(2) EIRR and/or FIRR, and/or other economic analysis	(if applicable)										
2.5 Environmental and social impact, and mitigation measures											
(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1" style="width: 100%;"> <tr> <td style="width: 15%;">Negative: b</td> <td>Project:</td> </tr> <tr> <td>Positive: d</td> <td>a: is likely to have minimal or little impact on the environment and/or society</td> </tr> <tr> <td></td> <td>b: may have an impact on the environment and/or society</td> </tr> <tr> <td></td> <td>c: is likely to have a significant impact on the environment and/or society</td> </tr> <tr> <td></td> <td>d: will have a significant impact on the environment and/or society</td> </tr> </table>	Negative: b	Project:	Positive: d	a: is likely to have minimal or little impact on the environment and/or society		b: may have an impact on the environment and/or society		c: is likely to have a significant impact on the environment and/or society		d: will have a significant impact on the environment and/or society
Negative: b	Project:										
Positive: d	a: is likely to have minimal or little impact on the environment and/or society										
	b: may have an impact on the environment and/or society										
	c: is likely to have a significant impact on the environment and/or society										
	d: will have a significant impact on the environment and/or society										
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • Possible environmental impacts might occur with building construction; provision of electricity, water and sewage etc. These will be addressed in the preparation for construction/renovation activity. <p>(Positive)</p> <ul style="list-style-type: none"> • On the social side, the project would provide several opportunities for affirmative action for female ministry staff and management. Women could be targeted for advancing their technical skills, as well as grooming for leadership roles. 										
2.6 Monitoring and evaluation for impact measurement											
(1) Measurable indicators and situation at a starting point:	The starting point for the project is low capacity within MAFCRD, MLFI, and MEDIWR to deliver the services required by the agricultural sector. Indicators would include: <ul style="list-style-type: none"> • the level of organizational capacity; • the level of knowledge and skills of management and staff; • number of staff trained (m/f); • the amount of infrastructure available; and • the level of satisfaction of project stakeholders 										
(2) Measurable indicators and situation at the end point:	By the end of the project the capacity of the three CAMP implementing ministries will be developed to the extent that they are delivering the required services to the agricultural sector stakeholders. The indicators would be: <ul style="list-style-type: none"> • the level of organizational capacity ; • the level of knowledge and skills of management and staff; • number of staff trained (m/f); • the amount of infrastructure resources available; and • the level of satisfaction of project stakeholders 										
(3) Methods of measurement and sources of information:	A baseline study in the form of organizational, human resources and ministries' infrastructure assessments, in the three CAMP implementing ministries, of the three project components will be undertaken at the start of the project. At three year intervals project reviews will be undertaken following the same issues as the baseline. The sources of information will be the ministries' management and staff and the sector stakeholders receiving government services.										
(4) Responsible parties for the monitoring and evaluation:	The planning directorates and development partners will carry out the project reviews every two and a half to three years.										
2.7 Required human resources											
(1) Principle of human resources management:	As per the Government of the Republic of South Sudan's Civil Service Reform Program.										
(2) Required human resources in the public sector (Positions, grades and numbers):	All management and staff of MAFCRD, MLFI, and MEDIWR would participate in the project. In particular, MAFCRD's Directorate of Administration and Finance and MLFI's Directorate of Administration, Finance and Human Resources Development would be responsible for project implementation alongside the development partners. Similarly, MAFCRD's Directorate of Planning and Agricultural Economics and MLFI's Directorate of Planning would be involved in the monitoring and evaluation of the project. The corresponding Directorates at MEDIWR would also be involved.										
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	The following consultants will be required to carry out technical assistance and/or training: <p>Long Term:</p> <ul style="list-style-type: none"> • organizational development specialist • adult educator/industrial trainer • civil engineer <p>Short Term</p>										

Items	Information
	<ul style="list-style-type: none"> • organizational behaviour specialist • human resource administration specialist • financial management specialist • procurement specialist • information and communication technology specialist • knowledge management specialist • environment specialist • gender specialist • operations and maintenance specialist • monitoring and evaluation specialist • fleet management specialist <p>Local construction companies will be required for the infrastructure component, plus suppliers of furniture, office equipment and vehicles.</p>

2.8 Risk assessment with respect to project objectives and resources to be applied

(1) Expected level of risk:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; text-align: center;">H</td> <td style="width: 25%; text-align: center;">L: Low</td> <td style="width: 25%; text-align: center;">M: Medium</td> <td style="width: 25%; text-align: center;">H: High</td> <td style="text-align: right;">(select an indicator from the list)</td> </tr> </table>	H	L: Low	M: Medium	H: High	(select an indicator from the list)
H	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	Ongoing conflict in some regions of the country may not allow for the construction, refurbishing and equipping of offices.					

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	Gender considerations would be mainstreamed in the project components and throughout the project cycle. Special attention would be paid to ensuring equal/equitable participation, contribution and benefit by both men and women at all levels of the project. Project reporting, monitoring and evaluation would include production of gender disaggregated data, as well as gender specific results.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	Sufficient ministry budgets for operation and maintenance.
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05.04 CAMP implementing ministries capacity development project (cont.)

SSP/USD = 4

Project duration	Phase 1		Phase 2		Phase 3		Phase 4		Total																			
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000	% to total	
3 Equipment & furniture for 79 county level office				310	310	310	310	310	310	310																		
3 Subsidies, equity and loans																												
1 Provision of cash and/or in-kind subsidies																												
2 Provision of training services to the private sector																												
3 Equity investments																												
4 Provision of loans																												
5 Social assistance/donation (Emergency)																												
Total (SSP '000)	5,365	10,287	20,704	30,722	30,722	29,461	29,310	18,288	17,968	18,137																		
Total (USD '000)	1,341	2,572	5,176	7,681	7,681	7,365	7,327	4,572	4,497	4,534																		
% to total	3%	5%	10%	15%	15%	14%	14%	9%	9%	9%																		

Public sector project
Routine work by government
Private sector project
Routine work by private sector

6.5.5 Legal and regulatory framework enhancement project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector	Institutional Development		
(2) Project name:	Legal and regulatory framework enhancement project		
(3) Project ID:	05.05 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2015/16	Ending FY: 2024/25	Duration (years): 10
(5) Total investment:	SSP 11,380,000	USD 2,845,000	Note: Not including recurrent cost

1.2 Project characteristics:

	Code	Abbreviation	Description	Reference
(1) Subsector area:		ID.SA2	Policy and legal framework development	Table 2-3
(2) Government organisation:	13	MAF-AE	Directorate of Planning and Agriculture Economics	Table 2-6
	01	MAR- PL	Directorate of Planning	Table 2-6
(3) Activity types:	101	ID-LI	Legal and institutional development	Table 2-12
	104	ID-IM	Implementation and monitoring	Table 2-12

1.3 Project characteristics:

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	X
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	X
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/15-2020/21, 5 years)	X
	02	PH2	Phase II (2020/21-2025/26, 5 years)	X
	03	PH3	Phase III (2025/26-2030/31, 5 years)	
	04	PH4	Phase IV (2030/31-2040/41, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income		

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>Legislation is law making; the legislative process is a series of steps that a legislative body takes to evaluate, amend, and vote on proposed legislation. In South Sudan most legislation is enacted by the national and state assemblies. Implementation of legislation is left to other entities, such as law enforcement agencies, the courts, community leaders, and other government agencies. Typically the government 1) formulates a policy, 2) passes laws to implement the policy, 3) provides additional regulations, and 4) finally enforces it.</p> <p>Ministries set policy, but for a policy to become law it must be translated into a bill which is scrutinised by the appropriate assembly. When the assembly approves a bill, it becomes an act and regulations can be written; both laws and regulations can then be enforced.</p> <p>Historically donors have assisted ministries in formulating policy but have not assisted in translating policy into bills/acts/regulations. This activity requires specialised legal skills which are not always available in the ministries. Sometimes ministries have copied other countries' legislation; for example, the draft Fisheries and Aquaculture Development Bill 2012 is copied from the Kenyan legislation and refers to whales and sea cucumbers (South Sudan is landlocked).</p> <p>The legal and regulatory environment and services are currently weak due to the limited number of laws and regulations passed by the National Legislative Assembly (NLA) and there is inadequate enforcement on the ground. Even though there are many agricultural policies, few have been tabled as bills in the NLA, fewer have actually passed into law and even fewer are enforced.</p> <p>For example, the CAMP situation analysis described the current legal and regulatory situation in the agricultural subsector as follows:</p> <ul style="list-style-type: none"> • Crop subsector: There are no specific laws and regulations related to crop subsector. • Forestry subsector: The Forestry Bill 2009, covering comprehensive issues related to forestry subsector, is still being drafted pending approval of the Forestry Policy 2013 by the NLA. • Livestock subsector: Although 13 Bills have been prepared, they are still pending approval by the NLA and are not Acts. • Fisheries subsector: The Fisheries and Aquaculture Development Bill 2012 is still being drafted and is based on a 2006 version. Since then the Fisheries and Aquaculture Policy 2012-2017 has been formulated and not incorporated into the bill. • ID subsector: There are several laws such as the Land Act 2009, Investment Promotion Act, Public Finance Management Act, Procurement Law, Audit Act, and Taxation Act 2009. However laws facilitating financial incentives for private activities and investment, such as tax/tax exemption, private sector development laws and subsidies etc. are inadequate. <p>While the CAMP implementing ministries cannot pass legislation relating to issues that are not their responsibility, they can encourage other ministries to do so. A particularly important issue for the agriculture sector is land tenure.</p> <p>Due to the national government's limited expertise and funds, minimal technical and financial support is provided to state and local governments for the effective implementation of laws and regulations. The state governments are not able to draft new state legislation and do not adequately report on state legislation or the enforcement of national legislation.</p> <p>There is an urgent need to provide assistance to complete the legislative cycle in the agriculture sector, which would allow implementation of the various policies. Although assistance is required throughout the legislative cycle, the specialised legal skill of drafting bills is particularly needed. All subsectors have project profiles that address the legislative process. Coordination between the subsectors will be important.</p>
(2) Objectives:	<p>The project will primarily target the three CAMP implementing ministries, Ministry of Agriculture, Forestry, Cooperatives and Rural Development (MAFCRD), Ministry of Livestock and Fisheries Industries (MLFI), and Ministry of Electricity, Dams, Irrigation and Water Resources (MEDIWR). It will assist them to translate policy into bills for approval by the NLA (to become acts); produce the necessary laws and regulations; and develop the necessary environment for their enforcement. It will also develop their capacity to carry out these activities.</p>
(3) Overall description including temporal and spatial extent of	<p>The Directorates of Planning in the three CAMP implementing ministries and legal officers in the Directorates of Administration and Finance will be the main actors for facilitating</p>

Items	Information
project:	<p>intra-and inter-ministerial coordination, although other Directorates in the relevant subsector areas should be involved in the using their technical knowledge and skills. A task team of these staff will be formed.</p> <p>All subsectors have project profiles that address the legislative process. As these projects are implemented all will carry out similar activities:</p> <ul style="list-style-type: none"> • Review contents of the existing national policies, laws and regulations etc. • Identify gaps; plan how to fill them • Depending on gaps arrange for appropriate international experts to assist (policy needs a policy expert, drafting laws and regulations needs specialist lawyers) and facilitate their work • Facilitate the legislative process • Develop enforcement mechanisms for current and new laws and regulations <p>Not all subsector will perform all activities, for example the fisheries policy is already written and verified as suitable; the urgent task is to translate it into a bill for the NLA to approve. Different subsectors need different assistance</p> <p>It will be important to consider the relationship of national and state laws and regulations. Some states have developed laws and regulations which are not consistent with national laws and regulations and do not reflect national needs and priorities. Also, it is necessary to consider the various international treaties and agreements which the government has agreed to. The comparison of national and state laws will be done later in the project when the legislative framework is clearly identified.</p> <p>The task team will coordinate and facilitate the above activities with the relevant subsector CAMP projects. It will ensure that the right technical expertise is used at each stage, particularly when drafting laws and regulations. Subsector specific activities will be carried out by the subsector projects but with close coordination with this project. The South Sudan Law Review Commission will be an important partner.</p> <p>As (or after) the subsectors review current policies, laws and regulations they will assess compliance with them. They will develop enforcement mechanisms for current and new laws and regulations including prohibitions, penalties, incentives etc., and specific guidelines for enforcement. They will clarify which government bodies are responsible for enforcement, and who will monitor and supervise them.</p> <p>Training will be conducted on the legislative process (policy development, identifying policy gaps, formulating necessary policies, laws and regulations, enforcement etc.). It will be important for government staff to understand their responsibilities in the legislative process, particularly regarding the passage of a Bill through the National Legislative Assembly. Subsectors should use international experts to prepare bills as it would take too long to train the legal experts in the ministries to fulfil this function. However, the legal experts would receive on the job training from the international experts.</p>
(4) Component and activity structure:	<p>Component 1: Establish task team to facilitate intra-and inter-ministerial coordination</p> <p>Component 2: Review existing national policies, laws and regulations for subsector</p> <p>Component 3: Develop a comprehensive legislative framework for subsector</p> <p>Component 4: Develop capacity and provide support for developing and/or revising policies, laws and regulations</p> <p>Component 5: Harmonise national, state and local policies, laws and regulations</p> <p>Component 6: Establish enforcement framework</p> <p>Component 7: Develop guidelines and manuals and training courses for enforcement of laws and regulations</p> <p>Component 8: Provide training on enforcement activities</p> <p>Component 9: Support implementation of laws and regulations enforcement</p> <p>Component 10: Conduct monitoring and evaluation for enforcement activities</p> <p>Not all subsectors will carry out all components/activities, which will be selected according to subsector requirements.</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1: Establish task team to facilitate intra-and inter-ministerial coordination</p> <p>Activity 1.1: Clarify the functions, responsibilities and tasks of the task team. Establish the task team which consists of several staff of Directorates of Planning, legal officers in the Directorates of Administration and Finance, and other staff of subsector related Directorates in three CAMP implementing ministries. Make project plan</p> <p>Output: Intra-and inter-ministerial coordination in place</p> <p>Activity 1.2: Coordinate with other ministries regarding issues that affect the agriculture sector but are not the responsibility of the CAMP implementing ministries, such as land tenure</p>
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Items	Information
	<p>Outputs: Possible progress on issues important to the agriculture sector</p> <p>Component 2: Review existing national policies, laws and regulations for subsector Activity 2.1: Review contents of the existing national policies, laws and regulations Outputs: Report on existing policies, laws and regulations Activity 2.2: Analyse report for policy/law gaps, duplications, contradictions etc. in existing policies, laws and regulations Outputs: Identification of shortcomings in the existing policies, laws and regulations; responsible Directorates for existing policies identified</p> <p>Component 3: Develop a comprehensive legislative framework for subsector Activity 3.1: Develop a legislative framework for subsector Outputs: A draft legislative framework developed; necessary additional policies and laws identified with a plan/timeframe to develop them Activity 3.2: Clarify which Directorates and other related Ministries and/or institutions are responsible for implementing the new legislative framework (policy/laws/regulations/enforcement). Project plan Outputs: Directorates and other Ministries and/or institutions responsible for the new legislative framework identified Activity 3.3: Revise policy as necessary; international experts will assist relevant Directorates/ ministries plus provide on the job training. Output: Revised policy for subsector Activity 3.4: Draft new bills or revise current bills as necessary; international experts will draft with assistance of relevant Directorates/ ministries plus provide on the job training to ministry legal experts. Output: Various draft bills for subsector Activity 3.5: Concerned ministries submit and make presentation on bills to parliament (NLA) for approval Output: New Acts for subsector</p> <p>Component 4: Develop capacity and provide support for developing and/or revising policies, laws and regulations Activity 4.1: Prepare and conduct training for related government officers and task teams on policy analysis, policy and laws development; how the legislative process works from policy to enforcement and how to monitor it Outputs: Training contents and materials, government officers and task teams trained Activity 4.2: Support development of required policies and bills Outputs: Developed and/or revised draft policies and bills submitted for parliamentary approval</p> <p>Component 5: Harmonise national, state and local policies, laws and regulations Activity 5.1: Collect and review information about state and local legislative frameworks; compare to draft national legislative framework Outputs: State and local legislative frameworks identified and compared to draft national legislative framework Activity 5.2: Discuss with state, county, payam and boma officers a plan for harmonisation of legislative frameworks Outputs: Relations among the various frameworks, opinions of state and local level officers for harmonisation obtained, necessary actions clarified and documented</p> <p>Component 6: Establishment of enforcement framework Activity 6.1: Review existing laws, regulations, and rules and procedures to examine current enforcement functions; analyse causes of non-compliance and weak enforcement; clarify responsible directorates and their functions Outputs: Current enforcement environment described. Activity 6.2: Develop an enforcement framework, including penalties for non-compliance and rules and procedures for enforcement of laws and regulations Outputs: Enforcement framework including sampling methods, penalties and enforcement procedures; clarified roles of both national and state level government bodies; schedule for moving enforcement functions (inspection etc.) to the states Activity 6.3: Establish institutional arrangements to ensure enforcement of laws and regulations Outputs: Coordination committee with members from responsible directorates and departments with clear responsibilities/information channels etc.; enforcement unit in all directorates and departments with enforcement responsibilities (both national and state) Activity 6.4: Support the coordination committee to hold periodic meetings with key staff from other CAMP related projects Outputs: Shared information and discussions with key staff of other related projects; better coordination of enforcement activities from these projects</p>

Items	Information
	<p>Activity 6.5: Support the coordination committee to interact with governments from neighbouring countries and international organisations to learn about enforcement of laws and regulations Outputs: The coordination committee with knowledge about enforcement of laws and regulations in neighbouring countries</p> <p>Component 7: Develop guidelines and manuals and training courses for enforcement of laws and regulations Activity 7.1: Decide on priority laws and regulations to strengthen enforcement Outputs: Priority laws and regulations identified by the coordination committee Activity 7.2: Develop guidelines and manuals for the priority laws and regulations Outputs: Guidelines and manuals for enforcement of laws and regulations Activity 7.3: Develop training content and material; train the trainers from government training centres Outputs: Training courses on enforcement of laws and regulations (will be used in component 3)</p> <p>Component 8: Provide training on enforcement activities Activity 8.1: Conduct training for government officers Outputs: Trained officers of MAFCRD, state government officers, staff of National Bureau of Standards (NBS), staff of training centres and research centres, agricultural extension officers (AEOs), community development officers (CDOs), Cooperative officers (COs), enforcement officers in county, payam, and boma offices Activity 8.2: Conduct training for key staff of UN agencies, NGOs, aid organisations and community development extension workers (CBEWs) Outputs: Trained staff of UN, major NGOs, major aid organisations and CBEWs Activity 8.3: Conduct training for major private business owners, traders, wholesalers, selected farmers Outputs: Trained business owners such as agro-input providers, tractor service providers, traders, wholesalers, and selected farmers.</p> <p>Component 9: Support implementation of laws and regulations enforcement Activity 9.1: Support responsible national directorates and/or departments to implement enforcement of laws and regulations according to the priorities set by the coordination committee Outputs: Laws and regulations enforced by MAFCRD Activity 9.2: Support movement of enforcement functions responsible state units and/or departments Outputs: Enforcement functions done at the state level according to the enforcement framework, rules, and guidelines developed</p> <p>Component 10: Conduct monitoring and evaluation for enforcement activities Activity 10.1: Visit offices of responsible directorates and enforcement sites by type (food standard, pesticides, fertilisers, packaging, etc.) for monitoring Outputs: Monitoring and evaluation report to provide supervision and analysis made for improvement Activity 10.2: Provide suggestions and information for improvement of framework, rules, procedures, institutional arrangements, guidelines, manuals, training contents and materials to the coordination committee Outputs: Improved enforcement functions</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	External domestic/ international legal specialists and the South Sudan Law Review Commission providing technical assistance and training to government offices for policy, legal and regulatory formulation and enforcement.
(2) Description of beneficiaries within the framework of the project:	<p>Immediate beneficiaries are the government officers in the ask team which consists of several staff of Directorates of Planning, legal officers in the Directorates of Administration and Finance, and other staff of subsector-related Directorates in three CAMP implementing ministries.</p> <p>Long term with a successful project implementation, indirect beneficiaries are farmers, agro-input providers, traders, wholesalers, and other stakeholders</p>

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	Laws and regulations in each agriculture subsector would be produced and enforced. Capacity development of government officers on effective and efficient legal and regulatory formulation and enforcement. These outcomes will have a positive impact on creating an enabling environment for agricultural production and creating a vibrant agricultural market in South Sudan.
(2) EIRR and/or FIRR, and/or	(if applicable)

Items	Information				
other economic analysis:					
2.5 Environmental and social impact, and mitigation measures					
(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: a</td> <td>Project: a: is likely to have minimal or little impact on the environment and/or society</td> </tr> <tr> <td>Positive d</td> <td>b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society</td> </tr> </table>	Negative: a	Project: a: is likely to have minimal or little impact on the environment and/or society	Positive d	b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: a	Project: a: is likely to have minimal or little impact on the environment and/or society				
Positive d	b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society				
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	(Positive) This project would produce and strengthen laws and regulations which have significant positive impacts on the environment and society, such as the issues of agricultural chemical use , soil health and conservation, illegal and uncontrolled exploitation of forest resources, quarantine and pest control, standardization of production, legal and illegal multiple taxation, and land tenure and acquisition.				
2.6 Monitoring and evaluation for impact measurement					
(1) Measurable indicators and situation at a starting point:	Indicators at the starting points would include: • Number of relevant laws, regulations, and guidelines for enforcement in each agriculture subsector • Government capacity in the legislative process • Level of compliance for current laws • Government capacity for legal and regulatory enforcement				
(2) Measurable indicators and situation at the end point:	Indicators by the end of the project would include: • Number of relevant laws, regulations, and guidelines for enforcement in each agriculture subsector • Government capacity in the legislative process • Level of compliance for current and new laws • Government capacity for legal and regulatory enforcement				
(3) Methods of measurement and sources of information:	Baseline studies for legal and regulatory formulation and enforcement will be undertaken at the start of the project. At three year intervals project reviews will be undertaken following the same issues as the baseline. The results will be provided to the relevant ministries and DPs.				
(4) Responsible parties for the monitoring and evaluation:	• Directorate of Planning in the MAFCRD/ MLFI • South Sudan Law Review Commission • External domestic/ international monitoring specialists				
2.7 Required human resources					
(1) Principle of human resources management:	The task team members and the staff of concerned Directorates for legal and regulatory formulation and enforcement need to have an understanding of the legislative process. This may need to be improved as part of the project. Ideally ability to write proper and functional laws, regulations and guidelines for enforcement (but may not be possible).				
(2) Required human resources in the public sector (Positions, grades and numbers):	• Staff of Directorates of Planning, legal officers in the Directorates of Administration and Finance, and other staff of subsector-related Directorates in three CAMP implementing ministries who will serve on the task team • 1 legal assistant who is newly hired for the task team				
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	External domestic/ international legal specialists will be required to carry out technical assistance and training to government offices for legal and regulatory formulation and enforcement. • 5 external domestic/ international legal specialists for each subsector- 4M/M per year for the first three years+2M/M per year for the next three years • External domestic/ international monitoring specialists- 2M/M every three years				
2.8 Risk assessment with respect to project objectives and resources to be applied					
(1) Expected level of risk:	L L: Low M: Medium H: High (select an indicator from the list)				
(2) Explanation of expected risks:	Without functional and proper legal and regulatory enforcement mechanisms, formulation of laws and regulations has no meaning.				
2.9 Other special considerations and/or notes					
(1) Other special considerations and/or notes:	• Proper code of conduct and high ethics are necessary for all staff engaging in this project. Transparency is important for the process of legal and regulatory formulation and the enforcement mechanism. • This project should coordinate with other CAMP projects, such as “ <u>Establishment of a firm legislative framework project</u> ”, “ <u>Enhancement and laws and regulations enforcement project</u> ”, “ <u>Forest policy and legal framework establishment and maintenance project</u> ”, “ <u>National and state livestock policy and legal framework establishment and maintenance project</u> ”, “ <u>Fisheries and aquaculture law project</u> ” and “ <u>Agricultural business development support project</u> ”.				
2.10 Routine operation and required resources after the completion of the project					
(1) Description of routine activities and outputs and required financial and human	Laws, regulations and guidelines for enforcement should be reviewed every 10-15 years, taking into consideration the domestic situation and international treaties and agreements. After the project end and dissolution of the task team, laws, regulations, and guidelines for				

Items	Information
resources after the completion of the project. Description of the required resources can be done in an indicative manner.	enforcement should be modified when needed to reflect new and changing circumstances in the agriculture sector by the relevant Directorates/ ministries.

6.5.6 Feeder roads and rural market construction/ rehabilitation project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Institutional Development		
(2) Project name:	Feeder roads and rural market construction/ rehabilitation project		
(3) Project ID:	05.06	01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development	
(4) Start and ending fiscal year:	Starting FY: 2017/18	Ending FY: 2026/27	Duration (years): 10
(5) Total investment:	SSP 700,680,000	USD 175,170,000	Note: Not including recurrent cost

1.2 Project characteristics:

	Code	Abbreviation	Description	Reference
(1) Subsector area:		ID.SA3	Public infrastructure development	Table 2-3
(2) Government organisation:	13	MAF-AE	Directorate of Planning and Agriculture Economics	Table 2-6
	01	MAR-PL	Directorate of Planning	Table 2-6
(3) Activity types:	210	SP-SI	Social infrastructure development	Table 2-12
	209	SP-EI	Economic infrastructure development	Table 2-12

1.3 Project characteristics:

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	X
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	X
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	
	02	NS	National-State project	X
	03	SP	State project	X
	04	SC	State-County project	X
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	X
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	X
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:	<p>Infrastructure is the foundation of agricultural development and economic growth. For agriculture, infrastructure could be roads, facilities for storage, drying, processing, marketing and irrigation, slaughter houses, ports, etc. Issues of subsector specific infrastructure are dealt with by other CAMP projects. This project targets more general infrastructure such as road and market facilities.</p> <p>Roads and road transport development is one of the key priorities for the infrastructure sector in the South Sudan Development Plan (SSDP). However, interstate (or trunk) and other primary road networks are not well maintained and some areas become inaccessible during the rainy season. This makes transportation costs high. Especially, since the condition of feeder roads is extremely poor in most areas, collection of agricultural products from production areas is difficult and expensive. The Multi-Donor Trust Fund (MDTF) has funded several road projects. However, these projects focus mainly on the rehabilitation and maintenance of major interstate roads. Although some road projects have recently started focusing on the improvement of feeder roads to enhance accessibility of farmers and agricultural products to markets, the scale is not enough and government investment for them is still minimal.</p> <p>Public market facilities are poorly constructed with temporary materials, which are prone to outbreaks of fire. The floors are not of cement; there are usually no toilets or places to dispose of garbage; drainage systems are poor, leading to many puddles with dirty water during the rainy season, when sanitation conditions are extremely poor. There is inadequate access to water. On the other hand, private market facilities constructed by landowners or merchants are permanent structures with cement floors and walls. These market facilities are usually for processed products, such as maize flour, sugar and cooking oil, so sanitation conditions are fair.</p> <p>The above issues are described in the CAMP situation analysis report. This project will concentrate on construction/ rehabilitation of feeder roads and market facilities to facilitate the producer-to-market linkage and local sales of agricultural, forestry, and fishery products.</p>
(2) Objectives:	<p>The objective of the project is to support economic development in rural areas by removing the physical constraints of poor feeder roads and markets facilities, which will reduce rural transport costs for goods and passengers, and support farm production and marketing.</p>
(3) Overall description including temporal and spatial extent of project:	<p>This project will identify and prioritise major feeder roads and market facilities needed to be constructed/ rehabilitated with the cooperation with the Ministry of Transport, Roads, and Bridges (MTRB), Ministry of Housing and Physical Planning (MHPP), the Southern Sudan Road Authority (SSRA), Feeder Road Technical Committee (FRTC), and other development partners (DPs), who have been conducting feeder road projects, such as WFP, UNOPS, World Bank and USAID. Special focus will be on the roads and market facilities which are in the most productive areas.</p> <p>A participatory approach will be one of the strategies for facilitating implementation of this project. Various institutions at the national, state, and local government levels will be encouraged to participate in implementation. Especially, at the local government level, communities through their leaders should be mobilized to participate in feeder road and market facilities construction/rehabilitation.</p> <p>Consideration of the environment will be addressed by conducting an Environmental Impact Assessment (EIA) before construction/ rehabilitation.</p> <p>After construction/ rehabilitation, a management team for the new market facilities should be nominated and elected by the community leaders in the presence of the local government leaders. Development of market facilities would promote establishment of cooperatives and other groups.</p>
(4) Component and activity structure:	<p>Component 1: Construction/ rehabilitation of feeder roads in the ten states Component 2: Construction/rehabilitation of 79 rural market facilities in the counties</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1: Construction/ rehabilitation of feeder roads in the ten states Activity 1.1: Identify and assess major feeder roads in the ten states Outputs: Major feeder roads which should be constructed/ rehabilitated are identified, assessed, and prioritised Activity 1.2: Conduct community mobilization and sensitization to enhance participation</p>
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Items	Information
	<p>for construction/ rehabilitation and management afterwards Outputs: Communities at the payam and boma level are mobilized and sensitized Activity 1.3: Conduct Environmental Impact Assessment Outputs: Environmental Impact Assessment (EIA) report Activity 1.4: Design, tender and construction Outputs: Design documents, contracts awarded and construction commenced It is estimated that 1,200 km of feeder roads with bridges and culverts will be constructed; and, 1,800 km of feeder roads with bridges and culverts will be rehabilitated.</p> <p>Component 2: Construction/ rehabilitation of 79 rural market facilities in the counties Activity 2.1: Identify and assess suitable sites for the markets and specs and quantity of any necessary market infrastructure Outputs: Sites identified. Report with specs and quantity of any necessary market infrastructure materials Activity 2.2: Allocation of land by local government leaders Outputs: Land allocated with all the official documentation (title deeds) Activity 2.3: Conduct Environmental Impact Assessment (EIA) Outputs: Environmental Impact Assessment (EIA) report Activity 2.4: Design, tender and construction Outputs: Design documents , contracts awarded and construction commenced Activity 2.5: Establish governance structure and provide capacity building for the local people who will manage the market facilities Outputs: Management structure established and 79 groups of market managers trained</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	<p>The Directorate of Planning in MAFCRD/ MLFI will collaborate with other National Ministries and authorities such as Ministry of Transport, Roads, and Bridges (MTRB), Ministry of Housing and Physical Planning (MHPP), Southern Sudan Road Authority (SSRA), Feeder Road Technical Committee (FRTC) to implement this project.</p> <p>Ministry of Physical Infrastructure at the state level, local government and local leaders will be involved to mobilize communities to participate in the construction and rehabilitation of the infrastructure.</p>
(2) Description of beneficiaries within the framework of the project:	<p>The farmers will be the beneficiaries and also business people who trade in agricultural produce. Agricultural inputs and services will reach the farmers in the villages more easily and also produce from the farmers will easily reach the major markets in urban centres with reasonable transport costs.</p>

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<ul style="list-style-type: none"> • Lower transport costs for agricultural produce • Significant reduction in the prices of agricultural produce • Availability of local produce in rural and urban markets • Boost in trading activities which will stimulate the economy and create jobs • Improvement of the feeder roads and market facilities, which will contribute to the growth of local agriculture, and stimulate rural development.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1" style="width: 100%;"> <tr> <td style="width: 15%; vertical-align: top;"> Negative: c Positive: d </td> <td> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: c Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: c Positive: d	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • The construction works will remove trees and also large quantities of soil will be removed. This will impact the environment. Rivers close to the project sites may be contaminated with quantities of soil which will affect the users of the river, such as people, animals and aquatic animals. • An EIA will be conducted so that mitigation measures will be designed. Soil and materials that will contaminate water, such as rivers, will be carefully removed and disposed of safely; removal of the trees will also be done according to the EIA report <p>(Positive)</p> <ul style="list-style-type: none"> • Available low cost transport will be beneficial to both men and women, reducing time spent travelling; it will enable them, especially women, to attend to their families and other economic activities. • Covered markets will provide a better environment for women with infant children who will have shelter from sun and rain. • Feeder roads will ease provision of goods, especially agricultural inputs, and services to 		

Items	Information					
	communities. • Law enforcement agencies will easily access villages to attend to security issues					
2.6 Monitoring and evaluation for impact measurement						
(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • Length (km) of feeder roads already constructed/rehabilitated • Number and quality of market facilities already existing • Quantity of agricultural produce reaching the urban markets from local farmers (villages) • Transport cost and time spent by the farmers to transport produce to the markets • Markets are operational even during rainy season • Farmers have adequate and hygienic space to market their produce • Prices of agriculture produce 					
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • Length (km) of feeder roads newly constructed/rehabilitated • Number and quality of market facilities newly constructed/ rehabilitated • Quantity of agricultural produce reaching the urban markets from local farmers (villages) • Transport cost and time spent by the farmers to transport produce to the markets • Markets are operational even during rainy season • Farmers have adequate and hygienic space to market their produce • Reduction in prices of agriculture produce 					
(3) Methods of measurement and sources of information:	Baseline studies for feeder roads and market facilities will be undertaken at the start of the project. At three year intervals project reviews will be undertaken following the same issues as the baseline. The results will be provided to the relevant ministries and DPs.					
(4) Responsible parties for the monitoring and evaluation:	<ul style="list-style-type: none"> • Directorate of Planning in the MAFCRD/ MLFI • State ministries related with physical infrastructure • Local government - (community leaders) 					
2.7 Required human resources						
(1) Principle of human resources management:	<ul style="list-style-type: none"> • Competency/merit-based selection with suitable skills and personality is needed. • State: staff with engineering background, and experience of community mobilization/ project management. • Local government: staff with engineering background, and experience in project management, also with ability to motivate communities 					
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> • National: full time project manager with management experience • State: full time project coordinator with management and engineering background/ knowledge and skills • Local Government: full time project officer at the state level to oversee the implementation of the project. 					
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<ul style="list-style-type: none"> • Road and civil engineers who are in the private sector (contractors) will interact with Government staff. • Local community leaders, chiefs and sub-chiefs • Road construction and information management consultants: 4MM/ year x 5 years x 2 persons 					
2.8 Risk assessment with respect to project objectives and resources to be applied						
(1) Expected level of risk:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; text-align: center;">L</td> <td style="width: 25%; text-align: center;">L: Low</td> <td style="width: 25%; text-align: center;">M: Medium</td> <td style="width: 25%; text-align: center;">H: High</td> <td style="text-align: right;">(select an indicator from the list)</td> </tr> </table>	L	L: Low	M: Medium	H: High	(select an indicator from the list)
L	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	The risk will be low if: <ul style="list-style-type: none"> • The project is well managed and all stakeholders at various levels are involved in decision making • National, state and local government authorities are consulted and participate in decision making. • Site selection for construction of markets is done through community consensus with the involvement of the local government authorities. 					
2.9 Other special considerations and/or notes						
(1) Other special considerations and/or notes:	Without feeder roads and rural market facilities, the agriculture sector cannot develop in South Sudan, and production and productivity of farmers will remain at subsistence level.					
2.10 Routine operation and required resources after the completion of the project						
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<ul style="list-style-type: none"> • The Directorate of Planning in the MAFCRD/MLFI will coordinate the implementation of this project and it will carry this out in collaboration with other ministries such as Ministry of Transport, Roads, and Bridges (MTRB), Ministry of Housing and Physical Planning (MHPP), Southern Sudan Road Authority (SSRA), Feeder Road Technical Committee (FRTC) • Local Government and local communities will be in the front line and will coordinate with the state Ministry of Physical Infrastructure on technical, financial and capacity building issues • Feeder road construction or rehabilitation: the project will conduct the EIA, design the road and invite construction companies to bid for the work. The construction will commence after the successful bidder has been identified and a contract is awarded. • Construction of markets in south Sudan: the project will conduct the EIA, design the markets and invite construction companies to bid for the work. The construction will commence after the successful bidder has been identified and a contract is awarded 					

Items	Information
	<ul style="list-style-type: none">• Management structure: the project will set up a system of management which will carry out management and maintenance of the facilities at the market; the market managers will be paid. The majority of the management team should be female because they constitute over 75% of the traders in any market in South Sudan.

Part 3: Project cost estimation

Project duration	SSP/USD = 4																													
	Phase 1			Phase 2			Phase 3			Phase 4			Total																	
Cost group	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD '000	% to total			
05.06 Feeder roads and rural markets construction and rehabilitation project																														
1 Management and operation of project																														
1 Deployment of government staff				360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	3,600	900	1%	
2 Procurement of administrative services (contracted)																														
3 Procurement of professional services (contracted)				360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	3,600	900	1%	
1 Overall supervision of construction/rehabilitation																														
4 Implementation of staff training																														
5 Implementation of research, studies and surveys																														
6 Delivery of extension and training services to the private sector																														
7 Operation and maintenance																														
2 Construction of infrastructure and procurement of equipment																														
1 Construction of office buildings																														
2 Construction of research, training and other specialized buildings																														
3 Construction of feeder roads																														
1 1200 km of unpaved road construction				53,694	53,694	53,694	53,694	53,694	53,694	53,694	53,694	53,694	53,694	53,694	53,694	53,694	53,694	53,694	53,694	53,694	53,694	53,694	53,694	53,694	53,694	53,694	536,940	134,235	77%	
2 + 20-metre bailey bridges (50 places)				22,680	22,680	22,680	22,680	22,680	22,680	22,680	22,680	22,680	22,680	22,680	22,680	22,680	22,680	22,680	22,680	22,680	22,680	22,680	22,680	22,680	22,680	22,680	226,800	56,700	32%	
3 + culverts (50 places)				4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	40,000	10,000	6%	
4 1800 km of unpaved road rehabilitation				200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	2,000	500	0%
5 + 20-metre bailey bridges (35 places)				23,814	23,814	23,814	23,814	23,814	23,814	23,814	23,814	23,814	23,814	23,814	23,814	23,814	23,814	23,814	23,814	23,814	23,814	23,814	23,814	23,814	23,814	23,814	238,140	59,535	34%	
6 + culverts (50 places)				2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	28,000	7,000	4%	
4 Construction of production, market and transportation facilities																														
1 Construction of market facilities in 69 countries				16,014	16,014	16,014	16,014	16,014	16,014	16,014	16,014	16,014	16,014	16,014	16,014	16,014	16,014	16,014	16,014	16,014	16,014	16,014	16,014	16,014	16,014	16,014	160,140	40,035	23%	
2 Water supply facilities attached to new market				13,248	13,248	13,248	13,248	13,248	13,248	13,248	13,248	13,248	13,248	13,248	13,248	13,248	13,248	13,248	13,248	13,248	13,248	13,248	13,248	13,248	13,248	13,248	132,480	33,120	19%	
3 Rehabilitation of market facilities in 10 countries				1,242	1,242	1,242	1,242	1,242	1,242	1,242	1,242	1,242	1,242	1,242	1,242	1,242	1,242	1,242	1,242	1,242	1,242	1,242	1,242	1,242	1,242	1,242	12,420	3,105	2%	
4 Water supply facilities attached to rehabilitated market				1,344	1,344	1,344	1,344	1,344	1,344	1,344	1,344	1,344	1,344	1,344	1,344	1,344	1,344	1,344	1,344	1,344	1,344	1,344	1,344	1,344	1,344	1,344	13,440	3,360	2%	
5 Acquisition of land																														
4 Water supply facilities attached to rehabilitated market				180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	1,800	450	0%	
6 Procurement of vehicles																														
7 Procurement of equipment																														
3 Subsidies, equity and loans																														
1 Provision of cash and/or in-kind subsidies																														
2 Provision of training services to the private sector																														
3 Equity investments																														
4 Provision of loans																														
5 Social assistance/donation (Emergency)																														
Total (SSP '000)				70,068	70,068	70,068	70,068	70,068	70,068	70,068	70,068	70,068	70,068	70,068	70,068	70,068	70,068	70,068	70,068	70,068	70,068	70,068	70,068	70,068	70,068	70,068	700,680	100%		
Total (USD '000)				17,517	17,517	17,517	17,517	17,517	17,517	17,517	17,517	17,517	17,517	17,517	17,517	17,517	17,517	17,517	17,517	17,517	17,517	17,517	17,517	17,517	17,517	17,517	175,170	100%		
% to total				10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	100%			

Public sector project
Routine work by government
Private sector project
Routine work by private sector

6.5.7 National agricultural information system development project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector	Institutional Development		
(2) Project name:	National agricultural information system development project		
(3) Project ID:	05.07	01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development	
(4) Start and ending fiscal year:	Starting FY: 2017/18	Ending FY: 2021/22	Duration (years): 5
(5) Total investment:	SSP 13,061,000	USD 3,265,000	Note: Not including recurrent cost

1.2 Project characteristics:

	Code	Abbreviation	Description	Reference
(1) Subsector area:		ID.SA2	Public sector institution and management capacity development	Table 2-3
(2) Government organisation:	13	MAF-AE	Directorate of Planning and Agriculture Economics	Table 2-6
	01	MAR-PL	Directorate of Planning	Table 2-6
(3) Activity types:	201	SP-IM	Service delivery and infrastructure development - Information management and analysis	Table 2-12

1.3 Project characteristics:

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	X
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	X
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/15-2020/21, 5 years)	X
	02	PH2	Phase II (2020/21-2025/26, 5 years)	X
	03	PH3	Phase III (2025/26-2030/31, 5 years)	
	04	PH4	Phase IV (2030/31-2040/41, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

Comprehensive and reliable data and information concerning the agriculture sector is vital for planning, implementation and monitoring & evaluation (M&E) in general and specifically for various planned CAMP projects. The collection and compilation of agricultural statistics is also important for preparing various economic indices reflecting the progress and contribution of the agriculture sector.

Currently, there are numerous information collection and analysis systems about food security, markets, climate, and nutrition information in South Sudan. Most of them are implemented by development partners and only a few of them by the government. They are not coordinated with regard to coverage, frequency, quality, and methods of collecting information.

There are several major information collection systems on food security operated mainly by development partners and NGOs such as Integrated Food Security Classification (IPC), Crop and Food Security Assessment Mission (CFSAM), Food Security Monitoring System (FSMS), Famine Early Warning Systems Network (FEWSNET), Crop and Livestock Market Information System (CLiMIS), Agriculture and Livestock Situation Analysis (ALSA), and Annual Needs and Livelihoods Assessment (ANLA).

For example, FSMS is an information collection system used by FAO, United Nations Children’s Fund (UNICEF), and United Nations High Commissioner for Refugees (UNHCR). It provides a broad range of information related to agriculture and food, for example, overall food security status, cultivated crops, income sources and expenditures, purchasing power, coping strategies, market conditions etc.¹

The “Agriculture and Food Information System (AFIS) project” implemented by FAO aims to establish a national food and nutrition security information system. It participates in the Food Security Information Network (FSIN), which is a worldwide network established by FAO, WFP and the International Food Policy Research Institute (IFPRI). The aim of AFIS is to strengthen national agricultural information systems as well as to enhance government capacity to standardise data collection, analysis, and dissemination of data on agriculture.

However, most of these existing agriculture information systems are managed by development partners and are geared more towards food security and tend to be used for decision making for food security response programmes.

MAFCRD and MLFI are the key ministries responsible for improving food security. To do this, reliable information related to food and agriculture needs to be collected, analysed and disseminated by these two ministries to all levels of government (national, state, county, payam, and boma). In the government, there is a Food Security Council (FSC) established by presidential decree in 2012. The Food Security Technical Secretariat (FSTS) is a technical body under the FSC. The responsibilities of FSTS are to collect, compile, store, analyse, and disseminate food security data to the government and other concerned organisations. The FSTS periodically organises policy briefing meetings for national and state government officers on food security.¹⁷⁷ Information provided by FSTS should be coordinated with other information system; contents are not widely shared with all concerned bodies including development partners.

The limited data collection/analysis done by the national government is only compiled at the national level and not shared with state governments¹. Types of information, methodologies and tools for data collection and analysis vary. The capacity of data collection/usage of the government is limited both in human resources and competency at national and state levels. Information about food should be collected even in county or lower levels to identify more precisely the situation on the ground. Data collection and analysis needs to be handled in a timely manner.

The National Agricultural and Livestock Extension Policy suggests that an agriculture information and knowledge management system (AKIS) should be established. AKIS would be mainly a system for sharing information related to agriculture with research and educational institutions, private sector and government organisations. This should also be taken into consideration when designing a new national agricultural information system.

¹⁷⁷ Capacity Assessment of South Sudan: Food Security and Nutrition Information Systems. Food and Agriculture Organisation, World Food Programme, European Union, and United States AID., November 2013.

Items	Information
	<p>The National Bureau of Statistics (NBS) is the official government organisation responsible for designing and conducting surveys and censuses. The National Baseline Household Survey was conducted by NBS in 2009. The NBS also conducted a survey to produce the South Sudan Statistical Yearbook in 2011. Both surveys included information about agriculture. However, the type of information is limited and the years when data is collected is sporadic depending on availability of funds. More timely and comprehensive collection of agricultural information needs to be established. A large scale agricultural survey should be conducted every 5 to 10 years, and information stored, analysed and used.</p> <p>Better management of agriculture information is needed. A mechanism should be established to integrate information from the various food/agriculture information systems. Better coordination between development partners and government institutions (MAFRCD, MFLI, NBS, FSC etc.) is needed. While there is good information on food security issues, there is limited information on the status of agriculture (crop yields, inputs used, area cultivated, crops planted, profits farmers made, etc.). This gap needs to be addressed by a national agricultural information system. The project must define the scope of the information system, the purpose of information to be collected, standardise methods and tools to be used, determine the frequency of collecting information etc. The role of government needs to be determined and its capacity strengthened.</p> <p>In the long term this national agricultural information system will replace the various systems currently in use. However, in the short to medium term these systems will continue to provide essential information.</p>
(2) Objectives:	<p>The project's purpose is to improve management of agriculture information by 1) integrating information from the various agriculture information systems, 2) achieving better coordination between development partners and government institutions (MAFRCD, MFLI, NBS, FSC etc.), and 3) establishing a national agricultural information system.</p>
(3) Overall description including temporal and spatial extent of project:	<p>The project will establish a national agricultural information system (NAIS). The information will be collected by conducting surveys nationwide and compiled, analysed, and shared with interested parties. This system will be a database of agricultural information shared by the two CAMP partner ministries, Ministry of Agriculture, Forestry, Cooperatives and Rural Development (MAFCRD) and Ministry of Livestock and Fisheries Industries (MLFI).</p> <p>NAIS will be hosted by the planning directorates of MAFCRD and MLFI. The Undersecretaries of MAFCRD and MLFI will have overall responsibility. Each subsector will gather, analyse and disseminate agricultural data. Their capacity to do this must be developed.</p> <p>There must be close coordination between MAFCRD, MLFI, NBS and FSTS. NBS is responsible for the national census and surveys. The role of FSC and FSTS must be re-defined when NAIS is established as part of FSC's mandates is to gather, compile, analysis, and disseminate information related to agriculture, especially about food security. The roles of each government body need to be defined with clear terms of references.</p> <p>An assessment of the existing agricultural related information collection and analysis systems must be conducted at the beginning of the project. Details to be investigated include: purpose, types of data, frequency of collection and dissemination, methods and quality of data collection and analysis, availability of data and reports etc. Discussions will be held with the person responsible for each information system.</p> <p>There needs to be a coordination mechanism between the owners of the existing agriculture and/or food security information systems and NAIS. Careful consideration must be given as to how the existing systems and the new NAIS will in the long term merge. Data collected and analysed should be available to concerned government bodies and other interested parties. These activities should be completed within one year.</p> <p>There will be two types of survey: 1) large scale carried out every 5-10 years targeting 2,500 plus households, 2) small scale carried out every 6-12 months targeting 500 or less households. Information to be collected in both types will be defined in the second year; in fact, the small scale survey information will be partly a subset of the large scale survey information. The preparation and conducting of training will be done by the beginning of the third year. Depending on funding and human resource availability, actual data collection and analysis of either a small or large scale survey will be finished by the middle of the third year. Small scale surveys will be more targeted, for example targeting the basic agricultural information. Other activities will continue until the end of the project including monitoring and evaluation.</p>

Items	Information
(4) Component and activity structure:	<p>Component 1: Assess the current situation of information collection and analysis systems related to agriculture</p> <p>Component 2: Strengthen CAMP ministries ability to collect and use agricultural information</p> <p>Component 3: Conduct large scale national agricultural survey</p> <p>Component 4: Conduct periodic small scale surveys, and monitor and evaluate on NAIS functions</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1: Assess the current situation of information collection and analysis systems related to agriculture</p> <p>Activity 1.1: Assess the current situation of agriculture and food security information collection and analysis systems operated by development partners; this includes their data collection methods, types, quality, frequency, and timeliness, etc. Outputs: Assessment report with strengths, weakness, challenges as well as suggestions for improvement and coordination among existing development partner information systems</p> <p>Activity 1.2: Assess the current situation of agriculture and food security information collection and analysis systems operated by government bodies, including budget availability for activities Outputs: Assessment report with strengths, weakness, challenges as well as suggestions for improvement and coordination among existing government information systems</p> <p>Component 2: Strengthen CAMP ministries ability to collect and use agricultural information</p> <p>Activity 2.1: Define roles of CAMP ministries concerning agriculture information collection and use; design a coordination mechanism with other agriculture information systems Outputs: Institutional arrangements in place; responsibilities of ministries and directorates defined; coordination with other information systems established</p> <p>Activity 2.2: Establish a National Agricultural Information Committee (NAIC) and secretariat of NAIS. Select members for NAIC and the secretariat from MAFCRD and MFLI. Outputs: Members of NAIC and secretariat of NAIS selected; NAIC will include government and development partners</p> <p>Activity 2.3: Formulate a plan to achieve the long term objective that NAIS replaces the current agricultural information systems; information gathered in activities 1.1 and 1.2 will be used. Possible options: NAIS completely replaces current systems; current system(s) become part of NAIS etc. Outputs: Plan for government to be prime supplier of agricultural information (This discussion will be done as a part of the meeting held for the activity 2.1.)</p> <p>Activity 2.4: Determine types and volume of information needed, frequency of agricultural data collection etc. Design database for large and small scale national agricultural surveys Outputs: Data to be collected defined for both small and large scale surveys.</p> <p>Activity 2.5: Define how information is to be disseminated to other government bodies, research and educational institutions and private sector Outputs: User-friendly data base defined with easily accessible information</p> <p>Activity 2.6: Determine responsible Directorates and/or Departments for NAIS Outputs: Ownership established</p> <p>Component 3: Conduct large scale national agricultural survey</p> <p>Activity 3.1: Establish a task team to conduct data collection and analysis for large scale survey Outputs: Task team selected (80 officers including state and district level enumerators)</p> <p>Activity 3.2: Determine procedures for collection of agricultural survey data, selection of households, design of questionnaires, analysis, compilation, and dissemination Outputs: Procedures in place to conduct survey</p> <p>Activity 3.3: Prepare training contents and materials Outputs: Training contents and materials</p> <p>Activity 3.4: Train selected officers in charge of data collection, train officers in charge of data compilation and analysis, train officers in charge of report writing and data dissemination Outputs: Staff capable of carrying out large scale survey</p> <p>Activity 3.5: Prepare for large scale agricultural survey Outputs: Questionnaires prepared, appointments made, schedule determined, necessary equipment and means of transportation arranged</p> <p>Activity 3.6: Gather, compile, and analyse statistical data, and report results</p>
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Items	Information
	<p>Outputs: Agricultural survey report Activity 3.7: Disseminate data and information Outputs: Agricultural survey results available to all interested parties</p> <p>Component 4: Conduct periodic small scale surveys, and monitor and evaluate NAIS functions Activity 4.1: Establish a task team to conduct small scale survey Outputs: Task team selected (40 officers including supervisors) Activity 4.2: Identify data to be collected (will probably be subset of large scale survey data and depend on the target of the survey). Determine procedures for collection of agricultural survey data, selection of households, design of questionnaires, analysis, compilation, and dissemination Outputs: Procedures in place to conduct survey Activity 4.3: Prepare training contents and materials Outputs: Training contents and materials Activity 4.4: Train officers in charge of collection of data, train officers in charge of data compilation and analysis, train officers in charge of report writing and data dissemination Outputs: Staff capable of carrying out small scale survey Activity 4.5: Prepare for small scale agricultural survey Outputs: Survey tools prepared, appointments made, schedule for data collection and analysis determined, necessary equipment and means of transportation arranged Activity 4.6: Gather, compile, analyse data, and report results Outputs: Periodic reports of agricultural information Activity 4.7: Disseminate data and information Outputs: Disseminated report with periodic data Activity 4.8: Conduct M&E on activities of NAIS and review results to provide feedback by NAIC Outputs: Results of M&E reported to NAIS for improvement Activity 4.9: Hold periodic meetings among government bodies and development partners to exchange opinions and information about the effectiveness of NAIS and status of agriculture and food security in the country. Outputs: Reviewed activities and outputs of NAIS and suggested actions for improvement are identified and agreed among the stakeholders.</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	Directorate of Planning and Agriculture Economics of MAFCRD, Directorate of Planning of MLFI, state ministries of Agriculture, state ministries of Animal Resources and Fisheries, NBS, FSC, FSTS, and other development partners such as FAO and WFP
(2) Description of beneficiaries within the framework of the project:	MAFCRD, MLFI, FSC, FSTS, other national government bodies, development partners, NGOs are direct beneficiaries. Farmers and other agriculture related people including retailers, wholesalers, middlemen, traders, agro-inputs dealers, etc. are indirect beneficiaries.

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<ul style="list-style-type: none"> • Agricultural data and information gathered in a systematic manner, by agricultural surveys • Agricultural data and information packaged and analysed in a professional manner • Agricultural data and information disseminated not only to the government but also to development partners, research institutions, educational institutions, and end-users
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: a</td> <td>Project: a: is likely to have minimal or little impact on the environment and/or society</td> </tr> <tr> <td>Positive: d</td> <td>b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society</td> </tr> </table>	Negative: a	Project: a: is likely to have minimal or little impact on the environment and/or society	Positive: d	b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
Negative: a	Project: a: is likely to have minimal or little impact on the environment and/or society				
Positive: d	b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society				
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • No significant negative impacts are expected through this project. <p>(Positive)</p> <ul style="list-style-type: none"> • Comprehensive and reliable agricultural data would enable the government of South Sudan to understand the status of the nation's agriculture. It would help the government to make decisions based on facts. Establishment of a functional government agricultural information system would require gathering information from existing information systems related to agriculture and food security and making it easier for users to access agricultural information. Having knowledge of the exact status of agriculture is essential for the officers of MAFCRD and MLFI at national and state levels so they can provide effective and efficient services and make correct judgements to improve farming 				

Items	Information					
	practices and farmers' livelihood.					
2.6 Monitoring and evaluation for impact measurement						
(1) Measurable indicators and situation at a starting point:	<ul style="list-style-type: none"> • Types of information collected for agriculture with the existing information systems • Reliability and timeliness of information collected for agriculture with the existing information systems • Agricultural information systems operated by government organisations • Numbers of government officers who are capable of conducting large and small scale surveys to collect agricultural information 					
(2) Measurable indicators and situation at the end point:	<ul style="list-style-type: none"> • Coordinated agriculture and food security information system (long term) • Coordinated and demarcated responsibilities of government bodies and development partners about collecting, analysing, storing, and disseminating information • Frequency, types and quality of data collected and analysed by NAIS • Frequency of periodic data collection and analysis carried out by NAIS • Number of reports about periodic agricultural data collection written and disseminated by NAIS • Occurrence of small and large scale surveys and reliability of the data • Number of government officers who are capable of conducting large and small scale surveys to collect agricultural information 					
(3) Methods of measurement and sources of information:	Assessment report, minutes of meetings, government documents, report of periodic data collection and analysis, agricultural census, training records, training materials, and project reports					
(4) Responsible parties for the monitoring and evaluation:	National Agricultural Information Committee (NAIC) and the project team supported by Directorate of Planning and Agriculture Economics of MAFCRD and Directorate of Planning of MLFI					
2.7 Required human resources						
(1) Principle of human resources management:	<p>Development partners who are engaged in agriculture and food security information collection and analysis should cooperate with this project, especially during the planning stage. They would help identify how the existing information systems and NAIS would interact and avoid duplication.</p> <p>Members of the NAIC and secretariat for the operation of NAIS should be nominated for a two years assignment. The NAIC should include key development partner staff as well as government members.</p>					
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> • Project manager from MAFCRD or MLFI (one senior staff from either one of the Ministry, grade 3 or 4) • Project staff from MAFCRD and MLFI (one staff from the Directorate of Planning and Agriculture Economics. MAFCRD and one staff from the Directorate of Planning, MLFI) for project detailed design, conduct of assessment, project implementation and management, logistics, and monitoring, etc. • Two mid-level officers from each state, one from the Ministry of Agriculture and one from the Ministry of Animal Resources (these two staff are not regular project staff, but they should support the project implementation as needed.) • One member of FSC and one staff of FSTC to support implementation of the project and the member of FSC should be on the NAIC • One staff from NBS - staff with appropriate knowledge about data collection and analysis should be assigned to support this project and should be on the NAIC 					
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Consultants in the field of:</p> <ul style="list-style-type: none"> • Project management (Master's degree, 15-years experience): One • Expert for agriculture (BA or BSc, 10-years experience or more): One • Expert for social research or data management (BA, 7-years experience or more): One • Expert for agricultural surveys (BA or BSc, 10-years experience or more): One • Coordination and training (BA or BSc, 5-years experience or more): One <p>Training will be provided at government training centres. Assessment will be conducted by the project staff.</p>					
2.8 Risk assessment with respect to project objectives and resources to be applied						
(1) Expected level of risk:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">H</td> <td style="text-align: center;">L: Low</td> <td style="text-align: center;">M: Medium</td> <td style="text-align: center;">H: High</td> <td style="text-align: center;">(select an indicator from the list)</td> </tr> </table>	H	L: Low	M: Medium	H: High	(select an indicator from the list)
H	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	<ul style="list-style-type: none"> • The ongoing operating costs of NAIS and of conducting large scale surveys and periodic small scale surveys plus analysing the results will be high. These costs need to be budgeted for annually and as needed. Without this commitment by the government, establishing and maintaining NAIS would be difficult. The project would fund daily allowances and accommodation to the officers who will be assigned for data collection for both national and state levels. These costs need to be incorporated into the government budget by the end of the project. Otherwise, NAIS will not function in the long term. • If NAIS becomes the main agricultural information system, some of the existing information systems may stop their activities. This would make comparison of data and/or validation of the information collected and analysed by NAIS difficult. Transparency of data collection and reliability of data handled by NAIS will be critical. 					

Items	Information
	Thus, M&E on the functions of NAIS and validation of data would be crucial to maintain the credibility of NAIS.

2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	<ul style="list-style-type: none"> • Since several information systems covering agriculture and food security already exist and are operated by development partners. Full discussions and close coordination with them will be crucial to obtain support, demarcate roles, and have other stakeholders understand the government's long term objective of making NAIS the principal agricultural information system. Therefore, sufficient time should be spent to explain the concept of NAIS and the government intention as well as discuss with them at an operational level how both sides could collaborate with each other. The government and its staff need to show commitment to establish and operate the agricultural system. • Close collaboration is essential with projects which establish or strengthen information and data management systems in livestock, "<u>Livestock census, disease surveillance and information management system</u>", and fisheries, "<u>Fisheries information and fisheries resources management system development project</u>"; duplication must be <u>avoided</u>. Periodic meetings to exchange information and opinions among the projects will be important. • Timeliness will be important to report and disseminate the data with other stakeholders. The agriculture sector sometimes requires urgent decisions and actions, especially related to food security. Analysed data should be disclosed and shared before the upcoming season in the case of the crop subsector. Otherwise, the value of the information is lost. Providing information rapidly will be incorporated in on the job training supported by the project.
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2.10 Routine operation and required resources after the completion of the project

(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	Financial requirements are described in the section 2.8 (2) as part of the explanation of expected risks. Besides that, maintaining the functions of NAIC and the secretariat of NAIS will be a key factor to continue the routine activities necessary to meet the mandate of NAIS in the long term. Members of NAIC need to be active; officers assigned to NAIS and its secretariat staff need to be active.
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05.07 National agricultural information system development project (cont.)

SSP/USD = 4

Project duration	Phase 1		Phase 2		Phase 3		Phase 4				Total																	
	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	SSP '000 USD'000	% to total	
1 Construction of office buildings																												
2 Construction of research, training and other specialized buildings																												
3 Construction of feeder roads																												
4 Construction of production, market and transportation facilities																												
5 Acquisition of land																												
6 Procurement of vehicles																												
1 Pick up for census survey																												
7 Procurement of equipment																												
1 Survey tools for periodic data collection																												
2 GPS hand set for surveyor																												
3 Subsidies, equity and loans																												
1 Provision of cash and/or in-kind subsidies																												
2 Provision of training services to the private sector																												
3 Equity investments																												
4 Provision of loans																												
5 Social assistance/donation (Emergency)																												
Total (SSP '000)																												
Total (USD '000)																												
% to total																												

Public sector project
Routine work by government
Private sector project
Routine work by private sector

6.5.8 National agricultural research, extension and training system project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Institutional Development		
(2) Project name:	National agricultural research, extension and training system project		
(3) Project ID:	05.08	01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development	
(4) Start and ending fiscal year:	Starting FY: 2018/19	Ending FY: 2027/28	Duration (years): 10
(5) Total investment:	SSP 73,121,000	USD 18,280,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		ID.SA2	Public sector institution and management capacity development	Table 2-3
(2) Government organisation:	02	MAF-RE	Directorates of Research	Table 2-6
	09	MAR-RD	Animal and Fisheries Research and Development	Table 2-6
(3) Activity types:	103	ID-PP	Policy Formulation and Planning	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	X
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	
	04	CAADP-P4	Pillar 4: Agricultural research	X
(3) State:	71	UN	Upper Nile State	
	72	JG	Jonglei State	
	73	UT	Unity State	
	81	WA	Warrap State	
	82	NB	Northern Bahr el Ghazal State	
	83	WB	Western Bahr el Ghazal State	
	84	LK	Lakes State	
	91	WE	Western Equatoria State	
	92	CE	Central Equatoria State	
	93	EE	Eastern Equatoria State	
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	
	02	MT	Medium-term (5 to 10 years)	X
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	X
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	
	02	GBT	Greenbelt	
	03	HAM	Hills and Mountains	
	04	ISP	Ironstone Plateau	
	05	NSR	Nile-Sobat Rivers	
	06	PTL	Pastoral	
	07	WFP	Western Flood Plains	
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	X
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
	61	FGI	Financed by generated income	

Items	Information
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:	The CAMP situational analysis pointed out two main constraints related to research, extension, and training: (1) the capacity within the research, extension, and training systems within South Sudan was very weak with little new knowledge and services reaching the farmer, forester or fishers; (2) there was very little linkage between the three. This project would address these two issues.
(2) Objectives:	This project would address: (1) lack of capacity within the research, extension, and training systems within South Sudan; (2) lack of linkage between these three systems by creating a national agricultural research, extension, and training system, strengthening each of the three subsystems, and developing a strong linkage between them.
(3) Overall description including temporal and spatial extent of project:	<p>The National Agricultural Research, Extension, and Training System (NARETS) Project would establish NARETS. It recognizes the critically important, but often disjointed connection between research, extension, and training in the agricultural sector. The project would support the operations of the three partner ministries: Ministry of Agriculture, Forestry, Cooperatives and Rural Development (MAFCRD), Ministry of Livestock and Fisheries Industries (MLFI), and Ministry of Electricity, Dams, Irrigation and Water Resources (MEDIWR), their research centres, their extension systems, and their training centres. As well as the ministries, the NARETS would also involve educational institutions, NGOs, Community-based Organizations (CBOs), and private sector companies involved in farming, forestry, fisheries and irrigation research, extension and training. NARETS would provide the opportunity for the various stakeholders not only to share information with one another but to collaborate in conducting joint research, coordinate extension activities and co-train staff. The NARETS Secretariat would act as an oversight entity responsible for the quality of agricultural research, extension and training. It would be an inter-ministerial body whose membership would include individuals from MAFCRD, MLFI, MEDIWR, universities, NGOs and private sector companies. Although independent of MAFCRD, the Ministry would host NARETS in its Directorate of Research, Extension and Training. NARETS would be an affiliate of the National Research Council and would relate directly to CAADP's pillar four - improving agricultural research technology, dissemination and adoption.</p> <p>The project would strengthen agricultural research by creating a national research funding system and managing the new research grant process. It would involve all the stakeholders active in conducting agricultural research. The project would strengthen the agricultural extension system by enhancing the existing way extension is carried out, that is, through incorporating all stakeholders, who are delivering extension services to farmers, foresters and fishers into the national agricultural extension system. Also extension workers at all three partner ministries would be trained in the processes of extension, including how best to engage rural women. In addition, the project would strengthen the current oversight and quality of the training delivered to the agricultural sector through its three partner ministries' training centres. The duration for certificates and diplomas across sub-sectors would be assessed and standardized. Other CAMP projects will address other improvements to the training centres, such as: 1) construct and/or refurbish training centres, 2) promote the use of the centres for pre-service training for secondary school graduates who would find employment with government, NGOs, CBOs, and the private sector, 3) provide in-service training to government officers, particularly extension workers, 4) provide short courses, upon request, to farmer, forestry and fisheries groups, NGO staff members, CBO enterprise staff, and private sector company employees. All training would be demand-led, based on thorough training needs assessments and the involvement of employers. The centres would also provide services to the three partner ministries such as maintenance and repair of agricultural, forestry, fisheries and irrigation machinery, equipment and vehicles.</p> <p>NARETS itself will not conduct research and training. Other projects developed by the CAMP team will address training and research. This project will primarily focus on functions such as: organizational structures, oversight, coordination, research funding, standards/certification, training methodology.</p>
(4) Component and activity structure:	<p>Component 1: Establish NARETS and its secretariat Component 2: Support agricultural research Component 3: Support agricultural extension system Component 4: Support agricultural training centres</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1: Establish NARETS and its Secretariat Activity 1.1: Conduct assessment of the agricultural research, extension and training systems as practiced by MAFCRD, MLFI, and MEDIWR. Identify how to implement</p>
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Items	Information
	<p>NARETS</p> <p>Output: Plan for how to establish NARETS</p> <p>Activity 1.2: Create legal framework: prepare bill/law/regulations as necessary</p> <p>Activity 1.3: Establish NARETS: identify stakeholders; procure office space; provide office furniture and equipment and recruit personnel.</p> <p>Activity 1.4: Provide capacity development: develop strategic plan; human resources administration systems; financial management systems; planning, monitoring and evaluation; train officers.</p> <p>Output for activities 1.2-1.4: NARETS is ready to perform its duties</p> <p>Component 2: Support Agricultural Research</p> <p>Activity 2.1: Assess existing system for national research grants. Study other national systems</p> <p>Activity 2.2: Establish system for national research grants; obtain budget for grants</p> <p>Output for activities 2.1-2.2: National research grants system established with an annual research grant budget of USD 1.5 million for 20 annual research grants.</p> <p>Activity 2.3: Provide coordination concerning research with universities, research centres, training centres, NGOs and private sector by regular meetings and an annual conference to share research findings</p> <p>Output: Research priorities based on feedback from meetings and conference. New research findings made known to training centres, NGOs etc. and incorporated into their training.</p> <p>Component 3: Support Agricultural Training Centres</p> <p>Activity 3.1: Conduct assessment of the current situation of training and its delivery in national agricultural training centres. Investigate curriculum of certificate and diploma programs across sub-sectors.</p> <p>Output: Plan for capacity development of training centres and to regulate certificate and diploma programs.</p> <p>Activity 3.2: Strengthen oversight of the training centres. Provide capacity development as identified. Standardise curriculum for certificate and diploma programs and set up validation (accreditation) process for these qualifications. The meetings and conference (attended by training centres) in Activity 2.3 will ensure new research is incorporated into training</p> <p>Output: Vocational qualifications (certificate/diploma) recognised throughout South Sudan.</p> <p>Activity 3.3: Develop 50 Master Trainers. Their function will be to: 1) develop training plans, curriculums, trainers' guides and textbooks etc.; 2) train extension workers in how to deliver extension.</p> <p>Output: 50 Master Trainers ready to implement Component 4 (Support Agricultural Extension System)</p> <p>Component 4: Support Agricultural Extension System</p> <p>Activity 4.1: Conduct assessment of the current agricultural extension system, including gender aspects, and with particular reference to how the training centres and other actors (NGOs etc.) support extension work.</p> <p>Output: Plan to set up and implement standard curriculums for 1) training extension workers on how to deliver training 2) subject matter of training delivered by extension workers to farmers, fishers and foresters.</p> <p>Activity 4.2: Strengthen oversight of the national agricultural extension service. Deliver and promote use of 2 standard curriculums identified in Activity 4.1. Other CAMP projects will assist with the subject matter in curriculum 2. These 2 curriculums will be used by training centres and other actors training extension workers. Monitor and evaluate quality of extension services being provided by various service providers. Provide annual forum for stakeholder representatives to discuss issues and share their work</p> <p>Output: Better quality extension provided to the agricultural sector.</p> <p>Activity 4.3: Based on the curriculum developed in Activity 4.1, provide training in how to deliver extension including: how to engage rural women; initial needs assessment; training design; methods of delivery; and follow-up training and impact assessment. Training on technical skills etc. is addressed in other CAMP projects.</p> <p>Output: 800 extension workers trained in how to deliver extension</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	Local, regional and international consultants providing technical assistance and training. Local suppliers of office furniture and equipment
(2) Description of beneficiaries within the framework of the project:	Immediate beneficiaries are the government officers providing services to the public. Secondary beneficiaries are the members of the public who will receive improved services.

Items	Information		
2.4 Outcomes, impact and contributions to value added (i.e. economic growth)			
(1) Outcomes and impact:	<p>Farmers, foresters and fishers will have increased incomes due to strengthened agricultural research and training, which leads to an improved national extension system. Outcomes would include:</p> <ul style="list-style-type: none"> • New agricultural products, approaches, and systems are created • New knowledge and skills are imparted to farmers, foresters and fishers. • Training centres provide skilled agricultural, forestry and fisheries workers to government, civil society and the private sector. 		
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)		
2.5 Environmental and social impact, and mitigation measures			
(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1" style="width: 100%;"> <tr> <td style="width: 30%; vertical-align: top;"> Negative: a Positive: c </td> <td style="vertical-align: top;"> Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society </td> </tr> </table>	Negative: a Positive: c	Project: a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society
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(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • There will be no infrastructure development involved in this project, so no environmental impact is anticipated. <p>(Positive)</p> <ul style="list-style-type: none"> • The positive social impact would be great. By increasing new and/or improved inputs through research and its more efficient dissemination to farmers, foresters and fishers, by better trained extension workers, sector stakeholders would experience a better quality of life through increased household income. • As well, the project would provide affirmative action opportunities for women. For example, a number of research grants could be specified for women exclusively to ensure their participation and development as researchers. The project should also ensure that female and male extension workers and instructors are provided equal access to training. Where there are constraints to one sex or the other, those constraints should be taken into consideration when planning activities to ensure that participation is equitable. Also the incorporation of rural women into the overall extension system would be necessary. 		
2.6 Monitoring and evaluation for impact measurement			
(1) Measurable indicators and situation at a starting point:	<p>The starting point for the project is a poorly functioning national agricultural research, extension and training system within MAFCRD, MLFI, and MEDIWR; this system has to deliver the services required by the agricultural sector. Indicators would include:</p> <ul style="list-style-type: none"> • the level of coordination for agricultural research, extension and training within the CAMP three partner ministries • level of involvement of public, private, CBO and NGO stakeholders in agricultural research, extension and training • level of funding for agricultural research • number of research studies being carried out • the level of knowledge and skills of management and staff • number of staff trained • the amount of office furniture and equipment available; and • the level of satisfaction of project stakeholders 		
(2) Measurable indicators and situation at the end point:	<p>By the end of the project an efficient and effective national agricultural research, extension and training system would be functioning in South Sudan, involving and delivering the required services to the agricultural sector stakeholders. The indicators would be:</p> <ul style="list-style-type: none"> • the level of coordination for agricultural research, extension and training within the CAMP three partner ministries • level of involvement of public, private, CBO and NGO stakeholders in agricultural research, extension and training • level of funding for agricultural research (USD 1.5 million annually) • number of research studies being carried out through NARETS (target= 20 annually) • the level of knowledge and skills of management and staff • number of staff trained (targets: Extension workers= 1,200; Instructors=90) • the amount of office furniture and equipment available; and • the level of satisfaction of project stakeholders 		
(3) Methods of measurement and sources of information:	<p>A baseline study, in the form of assessments of the agricultural research, extension and training systems as practiced in MAFCRD, MLFI, and MEDIWR, will be undertaken at the start of the project. At three year intervals project reviews will be undertaken following the same issues as the baseline. The sources of information would be the ministries' management and staff, NARETS management and staff, and the sector stakeholders receiving government services.</p>		
(4) Responsible parties for the monitoring and evaluation:	<p>The planning directorates and development partners will carry out the project reviews every two and a half to three years.</p>		

Items	Information					
2.7 Required human resources						
(1) Principle of human resources management:	As per the Government of the Republic of South Sudan's Civil Service Reform Program.					
(2) Required human resources in the public sector (Positions, grades and numbers):	<p>All management and staff of MAFCRD, MLFI, and MEDIWR would participate in the project, in particular MAFCRD's, MLFI's, and MEDIWR's Directorates responsible for research, extension and Training would jointly be responsible for project implementation alongside the development partners. Similarly, MAFCRD's Directorate of Planning and Agricultural Economics and MLFI's Directorate of Planning would be involved in the monitoring and evaluation of the project. The corresponding Directorate at MEDIWR would also be involved.</p> <p>In addition, the NARETS Secretariat would be managed by a senior government officer at the Director General level and supported by a financial officer. Three Directors would supervise the three divisions of research, extension and training and link with their colleagues in the three partner ministries. Each division would have a coordinator specializing in the division's field, financial officer and an office assistant.</p>					
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>The following consultants will be required to carry out technical assistance and/or training:</p> <p>Long Term:</p> <ul style="list-style-type: none"> • organizational development specialist • agricultural research specialist • agricultural extension specialist • adult educator/agricultural trainer <p>Short Term:</p> <ul style="list-style-type: none"> • procurement specialist • information and communication technology specialist • knowledge management specialist • environment specialist • gender specialist 					
2.8 Risk assessment with respect to project objectives and resources to be applied						
(1) Expected level of risk:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; text-align: center;">M</td> <td style="width: 25%; text-align: center;">L: Low</td> <td style="width: 25%; text-align: center;">M: Medium</td> <td style="width: 25%; text-align: center;">H: High</td> <td style="text-align: right;">(select an indicator from the list)</td> </tr> </table>	M	L: Low	M: Medium	H: High	(select an indicator from the list)
M	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	Ongoing conflict in some regions of the country may not allow for the rollout of the new system and its provision of services to all areas.					
2.9 Other special considerations and/or notes						
(1) Other special considerations and/or notes:	<p>Each CAMP Sub-sector has prepared sub-sector-specific projects to provide capacity development for sub-sector research, extension and training centres that would:</p> <ul style="list-style-type: none"> • improve research centres' organizational effectiveness • train centres' management, researchers and staff • improve extension systems' organizational effectiveness • train extension workers in technical areas • improve training centres' organizational effectiveness • revise curriculum • train centres' management, trainers in technical areas, and staff, and • provide engineering, site preparation, new or refurbished buildings, laboratories, equipment, furniture and vehicles. <p>This project must coordinate with them.</p> <p>Gender considerations would be mainstreamed in the project components and throughout the project cycle. Special attention would be paid to ensuring equal/equitable participation, contribution and benefit by both men and women at all levels of the project. Project reporting, monitoring and evaluation would include production of sex and gender disaggregated data, as well as gender specific results.</p>					
2.10 Routine operation and required resources after the completion of the project						
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<p>GRSS budget allocation to support the operations of the new NARETS Secretariat and the funding for the research grant scheme.</p> <p>Sufficient ministerial budgets for continued operation and maintenance of the enhanced research, extension and training programs.</p>					

05.08 National agricultural research, extension and training system project (cont.)

Project duration	SSP/USD = 4												Total	% to total																
	Phase 1			Phase 2			Phase 3			Phase 4					SSP '000 USD '000	% to total														
Cost group	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40					
2 Provision of training services to the private sector				47	47	47	47	47	47	47	47	47	47	47	47													423	106	1%
1 Annual forum for research (per diem for participants)				14	14	14	14	14	14	14	14	14	14	14	14													122	30	0%
2 Annual forum for research (transportation for participants)				10	10	10	10	10	10	10	10	10	10	10	10													90	23	0%
3 Annual forum for extension (per diem for participants)				14	14	14	14	14	14	14	14	14	14	14	14													122	30	0%
4 Annual forum for extension (transportation for participants)				10	10	10	10	10	10	10	10	10	10	10	10													90	23	0%
3 Equity investments																														
4 Provision of loans																														
5 Social assistance/donation (Emergency)																														
Total (SSP '000)				122	8,673	8,673	12,525	10,023	7,791	6,329	6,329	6,329	6,329	6,329	6,329												73,121	100%	100%	
Total (USD '000)				31	2,168	2,168	3,131	2,506	1,948	1,582	1,582	1,582	1,582	1,582	1,582													18,280	100%	
% to total				0%	12%	12%	17%	14%	11%	9%	9%	9%	9%	9%	9%															

Public sector project
Routine work by government
Private sector project
Routine work by private sector

6.5.9 Gender capacity development project

Items	Information
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Part 1: Project profile administration

1.1 Project identification

(1) Subsector:	Institutional Development		
(2) Project name:	Gender capacity development project		
(3) Project ID:	05.09 01: Crop 02: Livestock 03: Forestry 04: Fisheries 05: Institutional Development		
(4) Start and ending fiscal year:	Starting FY: 2015/2016	Ending FY: 2019/2020	Duration (years): 5
(5) Total investment:	SSP 6,792,000	USD 1,698,000	Note: Not including recurrent cost

1.2 Project characteristics

	Code	Abbreviation	Description	Reference
(1) Subsector area:		ID. SA2	Public sector institution and management capacity development	Table 2-3
(2) Government organisation:	13	MAF-AE	Directorate of Planning and Agricultural Economics	Table 2-6
	01	MAR-PL	Directorate of Planning	Table 2-6
(3) Activity types :	103	ID-PP	Policy formulation and planning	Table 2-12
	203	SP-EX	Service delivery and infrastructure development - Extension and training	Table 2-12

1.3 Project characteristics

	Code	Abbreviation	Description	Selection
(1) Development theme:	01	RR	Reconstruction and recovery	
	02	FS	Food and nutrition security	
	03	EG	Economic growth and livelihood improvement	
	04	AT	Agriculture sector transformation	
	05	ID	Institutional development	X
(2) CAADP Pillars:	01	CAADP-P1	Pillar 1: Land and water management	
	02	CAADP-P2	Pillar 2: Market access	
	03	CAADP-P3	Pillar 3: Food supply and hunger	X
	04	CAADP-P4	Pillar 4: Agricultural research	
(3) State:	71	UN	Upper Nile State	X
	72	JG	Jonglei State	X
	73	UT	Unity State	X
	81	WA	Warrap State	X
	82	NB	Northern Bahr el Ghazal State	X
	83	WB	Western Bahr el Ghazal State	X
	84	LK	Lakes State	X
	91	WE	Western Equatoria State	X
	92	CE	Central Equatoria State	X
	93	EE	Eastern Equatoria State	X
(4) Objective time horizon:	01	ST	Short-term (less than 5 years)	X
	02	MT	Medium-term (5 to 10 years)	
	03	LT	Long-term (more than 10 years)	
(5) Planning time horizon (start):	01	PH1	Phase I (2015/16-2019/20, 5 years)	X
	02	PH2	Phase II (2020/21-2024/25, 5 years)	
	03	PH3	Phase III (2025/26-2029/30, 5 years)	
	04	PH4	Phase IV (2030/31-2039/40, 10 years)	
(6) Livelihood Zone:	01	EFP	Eastern Flood Plains	X
	02	GBT	Greenbelt	X
	03	HAM	Hills and Mountains	X
	04	ISP	Ironstone Plateau	X
	05	NSR	Nile-Sobat Rivers	X
	06	PTL	Pastoral	X
	07	WFP	Western Flood Plains	X
(7) Ownership:	01	NP	National project	X
	02	NS	National-State project	
	03	SP	State project	
	04	SC	State-County project	
	05	PP	Public-Private Partnership project	
	06	PS	Private sector project	
(8) Funding sources:	11	NBF	National government budget/development fund	X
	12	NLE	National government loans and equity financing	
	21	SBF	State government budget/development fund	
	22	SLE	State government loans and equity financing	
	31	DPG	Development partners grant	X
	32	DPL	Development partners loans and equity financing	
	41	PSI	Private sector Investment	
	51	NGG	NGO grant	
	52	NGL	NGO loans and equity financing	
61	FGI	Financed by generated income		

Items	Information
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>CAMP is expected to facilitate the transformation of the South Sudan agriculture sector from subsistence to commercial market driven agriculture. MAFCRD, MLFI and MEDIWR are charged with the responsibility of driving the transformation of the various subsectors. This transformation of the agriculture sector will require the mobilization of all available human resources, both women and men. The place of women and men in society concerning agricultural activities is different; they may play different roles, and have different capacities to participate, contribute and benefit as a result of their socially defined positions and roles. Gender equality and social transformation are necessary to achieve the economic transformation of the sector and ultimately the country. Gender analysis and gender mainstreaming will be central to ensuring that the contribution of both women and men will be harnessed towards the transformation effort.</p> <p>A brief gender capacity assessment conducted as part of CAMP development revealed serious gaps in policy and strategy, knowledge, skills and institutional arrangements in the three ministries which will impede mainstreaming gender in the CAMP delivery process, and in on-going subsector activities. Key findings of the assessment include:</p> <ul style="list-style-type: none"> • The sectoral policy framework demonstrates commitment to gender equality and women's empowerment, removing negative customs and cultural practices that limit women's participation, contribution and benefit from agriculture. However, the approach to gender mainstreaming is generally fragmented and inconsistent, as a result of limited knowledge and capacity to work with gender issues in the ministries. • There is need to revise and strengthen the policy framework especially at the subsector level to explicitly state this commitment in key areas such as guiding principles, policy statements, objectives, strategies and plans. • MLFI had set up a standalone directorate on gender analysis and mainstreaming by ministerial resolution in 2012. The directorate has a clear mandate and terms of reference, strategies and plans, activities, expected outputs and indicators. An officer had been assigned to it. However, the directorate was still not functional due to lack of financial resources. • MAFCRD had appointed a gender focal person from the department of Post Harvesting and Home Economics who already had full time responsibilities as director of that unit. The gender function did not have a clear mandate or terms of reference. • Very few staff in the three ministries had ever attended gender training or had practical skills for gender analysis, gender strategy development and gender mainstreaming. <p>Gender capacity development of the three ministries is therefore essential to ensure that there is adequate capacity for the mobilization of both women and men to achieve the sector's transformation from subsistence to market oriented commercial activities.</p>
(2) Objectives:	<p>The objectives of the project include:</p> <ul style="list-style-type: none"> • to strengthen the capacity of MAFCRD, MLFI and MEDIWR to work with gender issues • to mainstream gender into policies, strategies and projects • to implement programs stemming from ministerial policy.
(3) Overall description including temporal and spatial extent of project:	<p>MAFCRD, MLFI and MEDIWR recognise the importance of gender equality in the agricultural development of South Sudan. The commitment to gender equality and removing gender disparities has been captured in key policy, strategy and program implementation documents. The project will therefore support the translation of that commitment into practical changes in the management of subsectors' activities by strengthening their capacity to work with gender issues at a very practical level; and providing leadership and technical support in the transformation of sectoral activities at national, state, county, payam and boma levels.</p> <p>The project will require contracting external technical expertise to design and deliver appropriate capacity development activities at various levels of the three ministries. The consultants will work with gender units which will be set up by the three ministries. The consultants will also collaborate with the Ministry of Gender, Child and Social Welfare (MGCSW) which has been conducting gender training of focal persons in each ministry to promote social inclusiveness and effectively mainstream gender in all development processes, programs, policies and laws.</p> <p>The scope of the project will include:</p> <ul style="list-style-type: none"> • Review and development of appropriate policy and strategy frameworks to guide gender equality and gender mainstreaming activities of the three ministries • Recommending and setting up appropriate institutional mechanisms including a separate gender unit (as is in existence at MLFI) to provide guidance and leadership on the management of gender activities and also to create sustainable links with MGCSW to ensure technical support

Items	Information
(4) Component structure:	<ul style="list-style-type: none"> • In-depth gender capacity assessment of the three ministries • Gender training of trainers (TOT) to develop a pool of gender trainers including a core of male trainers • Gender training for different levels of government staff including national, state, county and payam <p>Component 1: Policy review and development Component 2: Establishment and capacity building of a gender unit in each ministry Component 3: In-depth gender capacity assessment Component 4: Gender training for different levels of government staff</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Component 1: Policy review and development</p> <p>Activity 1.1: Review existing subsector policies relating to gender. Collect and analyse subsector policy and strategy documents of the three ministries (MAFCRD, MLFI and MEDIWR). Identify gender gaps and entry points for gender mainstreaming. (2MM X 1 consultant) Output: Existing policies reviewed from gender perspective.</p> <p>Activity 1.2: Consultations with senior management and policy makers. Organise meetings to discuss the findings from policy review. Facilitate further meetings to discuss ways to advance the policy and strategy frameworks to strengthen gender mainstreaming. (1MM X 1 consultant, a half day meeting X 5 times, 10 participants per meeting) Output: Agreements on amendments to existing policy and/or development of new policy made through consultations with senior management and policy makers.</p> <p>Activity 1.3: Revise existing policy documents and develop new documents to strengthen gender mainstreaming. (2MM X 1 consultant) Output: Policy revised and/or developed to strengthen gender mainstreaming.</p> <p>Component 2: Establishment and capacity building of a gender unit in each ministry</p> <p>Activity 2.1: Establish gender units in MAFCRD and MEDIWR. Consultations with senior management. Determine legal requirements. Develop TOR. Facilitate the appointment of qualified and competent personnel (gender focal persons) to the new gender units. (2MM X 1 consultant) Output: Gender units, each with 2 gender focal persons, established at MAFCRD and MEDIWR. .</p> <p>Activity 2.2: Provide capacity development of the gender units. Provide focal persons with opportunities to attend gender training at MGCSW to improve knowledge and skills on mainstreaming gender. Provide office furniture and equipment (desks, chairs, computers, printers, etc.) in the two ministries. (1MM X 1 consultants) Output: Gender units with trained staff.</p> <p>Activity 2.3: Establish gender section within the library/resource centre of the three ministries. Provide space, identify materials on gender (books, reports, magazines, brochures, manuals, CDs/DVDs, etc.), procure materials and furniture (bookshelf), and promote use of the section. (1MM X 1 consultant) Output: Gender section in the library/resource centre established and well-stocked.</p> <p>Component 3 : In-depth gender capacity assessment</p> <p>Activity 3.1: Conduct a gender capacity assessment of the three ministries. Assist the gender units to: Facilitate discussions with senior management to explain the capacity assessment, its purpose and obtain buy-in Identify sources of information and define data gathering methodology, develop and design data gathering tools Collect the data Analyse and interpret the collected data Develop conclusions and recommendations Present report to senior management including strategies for gender capacity development (2MM X 1 consultant) Output: In-depth gender capacity assessment conducted by the gender units.</p> <p>Component 4: Gender training for different levels of government staff</p> <p>Activity 4.1: Prepare gender training plan based on the results of gender capacity assessment. The target of gender training includes not only national level staff but also state, county and payam levels. Consultations with state gender focal persons who were assigned by MGCSW are necessary. (2MM X 2 consultants) Output: Gender training plan of the three ministries prepared.</p> <p>Activity 4.2: Prepare training curriculums and materials. Collaboration with MGCSW is necessary. The training subjects would include: Concept of gender Gender analysis tools (Productive and reproductive roles, access to and control</p>
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Items	Information
	<p>of agricultural resources) Linkage between gender gaps and agriculture production Gender issues in household financial management Gender responsive research and extension Gender responsive planning and budgeting Gender sensitive indicators in monitoring and evaluation (2MM X 2 consultants) Output: Gender training curriculums with schedules and materials prepared. Activity 4.3: Conduct two week gender TOT at national level. Collaboration with MGCSW is necessary. Develop a pool of 15 (5 in each ministry) gender trainers including a core of male trainers who will continue to be a resource for training at different levels including state, county and payam. Training will be conducted in each ministry. (1MM X 2 consultants) Output: A pool of 15 gender trainers including male trainers developed. Activity 4.4: Conduct three day gender training at national, state, county and payam levels. Gender focal persons and trainers in the three ministries will conduct training but collaboration with MGCSW and state gender focal persons is necessary. The target of the training includes management staff at national and local governments, Agricultural Extension Officers (AEOs), Community Development Officers (CDOs) and Cooperative Officers (COs). Training will be conducted in Juba and state capitals. (15MM X 2 consultants, 1500 participants in total, 25 participants per training, 5 days including travel days per training, 2 training per month) Output: 1,500 staff at national, state, county and payam levels trained (100 national staff, 600 local government staff, 300 AEOs, 250 CDOs and 250 COs).</p>

2.3 Service providers and beneficiaries

(1) Description of service providers within the framework of the project:	The service providers would be senior gender consultants, the staff of MGCSW, the staff of the gender units of the three ministries (MAFCRD, MLFI and MEDIWR), and the pool of trained gender trainers.
(2) Description of beneficiaries within the framework of the project:	<p>Direct beneficiaries would be:</p> <ul style="list-style-type: none"> • The ministries from increased institutional capacity to work with gender issues • The ministry staff from increased knowledge on how to mainstream gender in their work • State, county and payam level staff from the support provided to increase their knowledge on gender and to mainstream gender in their activities <p>Indirect beneficiaries would be:</p> <ul style="list-style-type: none"> • Communities (women and men) from improvements in social relations and increased capacity to undertake productive activities • People of South Sudan from improved harmony in communities between women and men and increased agricultural production

2.4 Outcomes, impact and contributions to value added (i.e. economic growth)

(1) Outcomes and impact:	<ul style="list-style-type: none"> • Improved gender mainstreaming in the policies, strategies, projects and activities of MAFCRD, MLFI and MEDIWR • Improved capacity at national, state, county and payam levels to work with gender issues and facilitate social transformation • Social transformation which will lead to economic transformation of the agricultural sector in South Sudan by full-participation of women and men.
(2) EIRR and/or FIRR, and/or other economic analysis:	(if applicable)

2.5 Environmental and social impact, and mitigation measures

(1) Expected level of negative and positive impact (select an indicator from the list in the right):	<table border="1"> <tr> <td>Negative: a Positive: c</td> <td> <p>Project:</p> <p>a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society</p> </td> </tr> </table>	Negative: a Positive: c	<p>Project:</p> <p>a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society</p>
Negative: a Positive: c	<p>Project:</p> <p>a: is likely to have minimal or little impact on the environment and/or society b: may have an impact on the environment and/or society c: is likely to have a significant impact on the environment and/or society d: will have a significant impact on the environment and/or society</p>		
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	<p>(Negative)</p> <ul style="list-style-type: none"> • No negative environmental or social impact will be anticipated. <p>(Positive)</p> <ul style="list-style-type: none"> • More policies and strategies of MAFCRD, MLFI and MEDIWR will address and incorporate gender issues to enhance women's empowerment and gender equality. • More subsector projects and activities such as training, research, extension work and agricultural production will have better gender considerations so as to involve both women and men. • In the long run, there will be social harmony and improved quality of lives in communities by creating awareness of gender issues and reducing gender gaps. 		

2.6 Monitoring and evaluation for impact measurement

(1) Measurable indicators and situation at a starting point:	The project would identify indicators and benchmarks from the baseline information accumulated from the gender capacity assessment as well as policy and strategy reviews.
(2) Measurable indicators and situation at the end point:	The benchmarks and indicators identified at the starting point would be used to measure progress towards achievement of results, e.g. number of policy and strategy documents

Items	Information					
	reviewed, number and content of proposals accepted in policy and strategy review, number of new policy and strategy documents developed and approved, gender units operating, quantity of material on gender in the libraries/resource centres, number of gender trainers trained, number of different levels of government staff who attended gender training.					
(3) Methods of measurement and sources of information:	Quantitative and qualitative methods, observation, review of materials, reports, discussions with ministries' staff and management at all levels.					
(4) Responsible parties for the monitoring and evaluation:	Gender units (gender focal persons) in the three ministries, MGCSW and the project team (consultants)					
2.7 Required human resources						
(1) Principle of human resources management:	As per the Government of the Republic of South Sudan's Civil Service Reform Program.					
(2) Required human resources in the public sector (Positions, grades and numbers):	<ul style="list-style-type: none"> • 2 gender focal persons to constitute the gender unit at each ministry • 2 staff from MGCSW as trainers of gender training 					
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	2 senior gender consultants who have rich experience on gender mainstreaming and training for government officials.					
2.8 Risk assessment with respect to project objectives and resources to be applied						
(1) Expected level of risk:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; text-align: center;">M</td> <td style="width: 25%; text-align: center;">L: Low</td> <td style="width: 25%; text-align: center;">M: Medium</td> <td style="width: 25%; text-align: center;">H: High</td> <td style="text-align: right;">(select an indicator from the list)</td> </tr> </table>	M	L: Low	M: Medium	H: High	(select an indicator from the list)
M	L: Low	M: Medium	H: High	(select an indicator from the list)		
(2) Explanation of expected risks:	The consultants may face resistance and bureaucracy from the ministries which could slow down the project progress. It would be important to have meetings with senior management at the beginning of the assignment to get them on board and ask for their continuous support.					
2.9 Other special considerations and/or notes						
(1) Other special considerations and/or notes:	Throughout the project, it is recommended to work closely with MGCSW and to get necessary support from them. It is their mandate to spearhead the achievement of gender equality and women's empowerment, so as to reduce vulnerability and promote social inclusiveness and effectively mainstream gender in all national development processes, programs, policies and laws.					
2.10 Routine operation and required resources after the completion of the project						
(1) Description of routine activities and outputs and required financial and human resources after the completion of the project. Description of the required resources can be done in an indicative manner.	<ul style="list-style-type: none"> • Gender capacity building (training) at national, state, county and payam levels by the gender units in the three ministries in collaboration with MGCSW • Management and monitoring by the gender units to ensure continued mainstreaming of gender in organisational policies, systems and processes. e.g. human resource management, recruitment, performance management, planning and budgeting 					

