

The Republic of South Sudan

Ministry of Agriculture, Forestry, Cooperatives and Rural Development

Ministry of Livestock and Fisheries Industries

Comprehensive Agricultural Development Master Plan

Final Report

Annex I

CAMP Investment Plan

Volume 2

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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	Phase III 2030/31 2031/32 2032/33 2033/34 2034/35 2035/36 2036/37 2037/38 2038/39 2039/40	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													11,932	2,983 NS	
03.03 Participatory establishment and management of forest reserves project													20,790	5,198 NS/SC	
T3 Economic growth and livelihood improvement													181,772	45,443	
03.04 Market development and promotion for commercial forest products project													1,816	454 N	
03.05 Multipurpose Management of Forest Reserves project													30,005	7,501 NS	
03.06 Industrial-Scale Forest Plantations development for log production project													90,936	22,734 N/PPP/P	
03.07 Fuelwood and Charcoal Value Chains - sustainable production and efficiency improvement project													14,313	3,578 NS	
03.08 Development of industrial processing and manufacturing of timber products project													44,703	11,176 N	
T4 Agriculture sector transformation													57,729	14,432	
03.09 Forest-based tourism development project													19,951	4,988 N	
03.10 Integrated upscaling of industrial and outgrower tree plantations and expansion of wood processing for export project													18,849	4,712 N	
03.11 Mainstreaming "Green-Economy" practices into forestry, forest industries and forest-based tourism project													18,930	4,732 N	
T5 Institutional development													1,160,073	290,018	
03.12 National forest resources inventory, information and management plans project													1,097,671	274,418 N	
03.13 Forest policy and legal framework establishment and maintenance project													2,983	746 N	
03.14 Forestry institutional and human resources capacity development project													39,250	9,812 N	
03.15 Establishment of the South Sudan Forest Research Institute project													20,170	5,042 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

4.1.2 Investment Planning Space by CAADP Pillar

Subsector	Project ID	Project name	Phase I	Phase II	Phase III	Phase IV	Year	SSP ('000)	USD ('000)	Responsibility																		
03 Forestry Subsector	P1 Pillar 1: Land and water management		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	
	03.01	Forestry sector project preparation facility and sawlog plantations grant scheme fund project																										
	03.03	Participatory establishment and management of forest reserves project																										
	03.05	Multipurpose Management of Forest Reserves 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																										
	P2 Pillar 2: Market access																											
	03.04	Market development and promotion for commercial forest products project																										
	03.06	Industrial-Scale Forest Plantations development for log production project																										
	03.07	Fuelwood and Charcoal Value Chains - sustainable production and efficiency improvement 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																										
P3 Pillar 3: Food supply and hunger																												
03.02	Community forestry, agroforestry and smallholder plantations development project																											
P4 Pillar 4: Agricultural research																												
03.15	Establishment of the South Sudan Forest Research Institute project																											

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

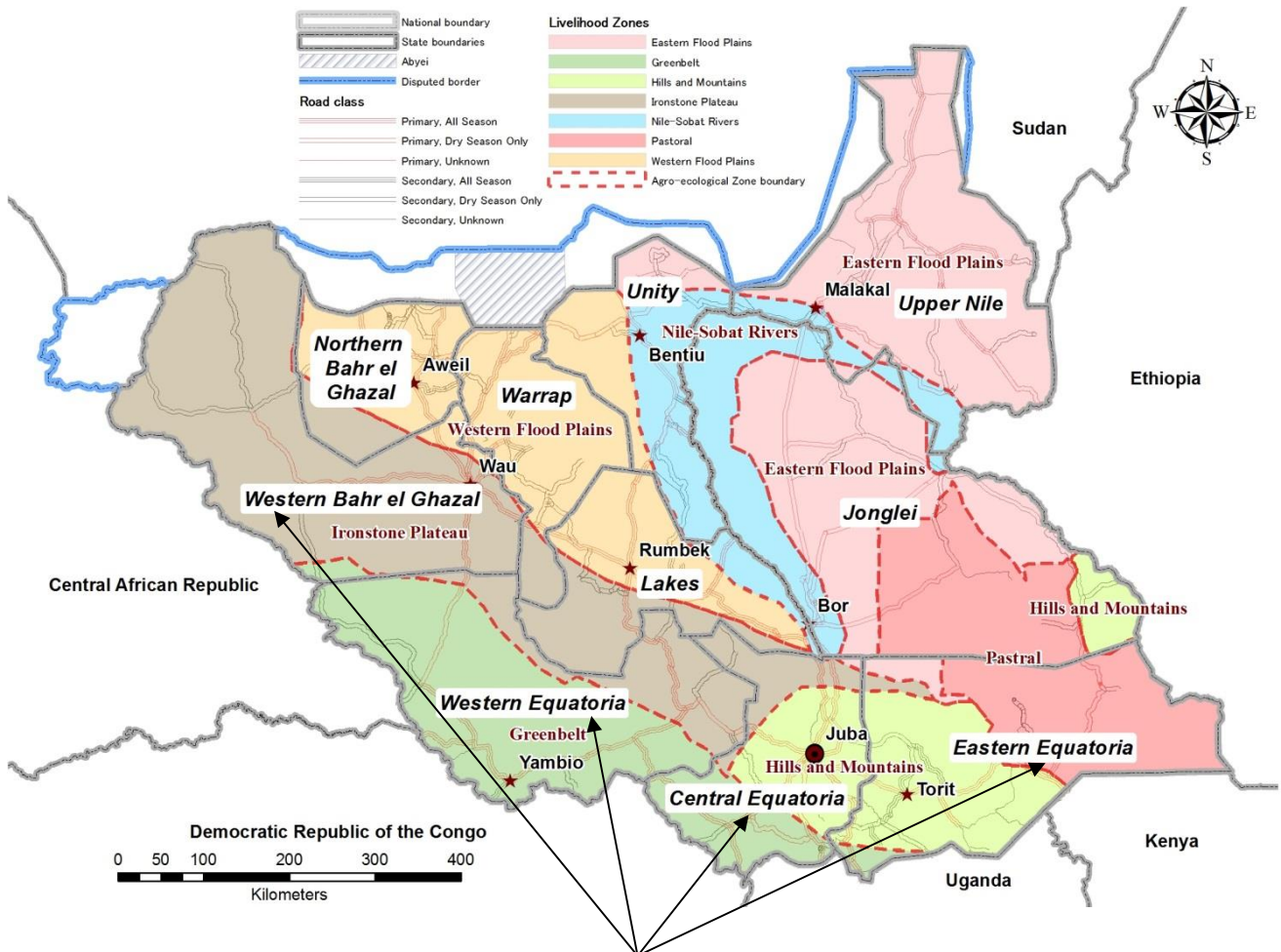
Subsector Development Theme Project ID Project name	SSP/USD = 4.00											
	Phase I 15/16 16/17 17/18 18/19 19/20	Phase II 20/21 21/22 22/23 23/24 24/25	Phase III 25/26 26/27 27/28 28/29 29/30	Phase IV 30/31 31/32 32/33 33/34 34/35 35/36 36/37 37/38 38/39 39/40	SSP (million)	USD (million)						
00 CAMP Investment Plan total	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						
Project 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	8,485.3	2,121.3						
Scaling-up 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						
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						
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 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 0.0 0.0 0.0	109.0	27.2						
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 0.0 0.0 0.0	138.8	34.7						
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 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 0.0 0.0 0.0	109.0	27.2						
T2 Food and nutrition security	1.1 1.4 0.7 0.7 0.7	0.7 0.7 0.7 0.8 1.1	3.1 3.7 4.3 4.3 4.3	7.0 6.2 6.8 7.0 12.5 13.1 13.8 13.3 13.9 16.6	138.8	34.7						
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	1.0 1.0 1.0	3.4 2.1 1.9 2.4 4.3	5.9 5.6 8.0 9.1 12.4 14.4 15.9 16.8 17.6 23.5	148.1	36.5						
Theme total	0.9 0.5 0.9	5.7 3.5 3.7 4.2 3.8	5.8 4.3 3.6 4.6 6.4	6.7 6.7 8.0 9.1 12.4 14.4 15.9 16.8 17.6 23.5	178.9	44.7						
03.02 Community forestry, agroforestry and smallholder plantations development project	0.9 0.5 0.9	2.2 0.4 0.4 0.9 0.5	0.4 0.9 0.4 0.9 0.8	0.8 1.1	11.9	3.0						
Scaling-up cost	0.9 0.5 0.9	1.4 0.4 0.3 0.5 2.0	1.4 0.4 0.3 0.5 2.0	1.6 0.8 2.5 2.7 5.4 5.2 5.5 5.8 6.0 9.7	49.7	12.4						
Project total	0.9 0.5 0.9	2.2 0.4 0.4 0.9 0.5	1.8 1.3 0.7 1.4 2.8	2.4 1.9 2.5 2.7 5.4 5.2 5.5 5.8 6.0 9.7	61.6	15.4						
03.03 Participatory reestablishment and management of forest reserves project	3.5 3.2 2.3 2.3 2.3	2.0 1.0 1.0	2.0 1.8 1.6 2.0 2.3	4.4 4.8 5.4 6.4 7.0 9.2 10.5 11.0 11.6 13.8	96.4	24.1						
Project cost	0.8 0.6 0.1 0.1 0.2	1.5 4.8 17.9 14.3 44.1	15.5 17.7 21.8 19.1 28.9	35.6 42.7 58.5 41.1 55.6 70.0 56.6 67.6 79.2 73.0	117.2	29.3						
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 8.0 14.7 11.5 21.5	32.1 42.7 56.5 41.1 55.6 70.0 56.6 67.6 79.2 73.0	721.3	180.3						
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	4.4 4.8 5.4 6.4 7.0 9.2 10.5 11.0 11.6 13.8	903.1	225.8						
T3 Economic growth and livelihood improvement	0.8 0.6 0.1 0.1 0.2	1.5 4.8 17.9 14.3 44.1	15.5 17.7 21.8 19.1 28.9	35.6 42.7 58.5 41.1 55.6 70.0 56.6 67.6 79.2 73.0	1.8	0.5						
Project 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	4.5 4.2 4.3 4.5 4.8 5.9 5.9 6.2 6.5 7.8	79.5	19.9						
Scaling-up cost	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	4.5 4.2 4.3 4.5 4.8 5.9 5.9 6.2 6.5 7.8	81.3	20.3						
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	30.0	7.5						
03.04 Market development and promotion for commercial forest products 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	127.2	31.8						
Project cost	0.9 28.1	0.9 28.1	3.3 3.3 3.8 3.4 29.1	3.5	90.9	22.7						
Scaling-up cost	0.9 28.1	0.9 28.1	3.3 3.3 3.8 3.4 29.1	3.5	248.3	62.1						
Project total	0.9 28.1	0.9 28.1	4.5 4.4 4.0 4.3 30.0	7.4 16.2 26.0 12.5 25.2 34.7 17.7 28.6 40.5 25.8	339.2	84.8						
03.05 Multipurpose Management of Forest Reserves project	0.6 0.6 4.5 1.7 3.6	3.3	6.0 5.3 4.7 4.5 4.5	7.5 7.5 7.9 8.0 8.5 9.0 9.5 10.2 10.5 12.5	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	7.5 7.5 7.9 8.0 8.5 9.0 9.5 10.2 10.5 12.5	138.4	34.6						
Scaling-up cost	0.6 0.6 4.5 1.7 3.6	3.3	6.0 5.3 4.7 4.5 4.5	7.5 7.5 7.9 8.0 8.5 9.0 9.5 10.2 10.5 12.5	152.7	38.2						
Project total	0.8 6.6 2.9 3.6	0.2 0.2 2.2 0.2 0.2	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	44.7	11.2						
03.06 Industrial-Scale Forest Plantations development for log production project	0.8 6.6 2.9 3.6	0.2 0.2 2.2 0.2 0.2	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	127.9	32.0						
Project cost	0.8 6.6 2.9 3.6	0.2 0.2 2.2 0.2 0.2	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						
Scaling-up cost	0.8 6.6 2.9 3.6	0.2 0.2 2.2 0.2 0.2	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								
Project total	0.8 6.6 2.9 3.7	3.7 3.8 5.8 4.2 4.2	4.2 4.2 5.7 7.8 7.8	8.7 8.1 10.1 9.0 9.5 11.0 10.6 13.2 11.8 15.3								
03.07 Fuelwood and Charcoal Value Chains - sustainable production and efficiency improvement project	0.8 6.6 2.9 3.7	3.7 3.8 5.8 4.2 4.2	4.2 4.2 5.7 7.8 7.8	8.7 8.1 10.1 9.0 9.5 11.0 10.6 13.2 11.8 15.3								
Project cost	0.8 6.6 2.9 3.7	3.7 3.8 5.8 4.2 4.2	4.2 4.2 5.7 7.8 7.8	8.7 8.1 10.1 9.0 9.5 11.0 10.6 13.2 11.8 15.3								
Scaling-up cost	0.8 6.6 2.9 3.7	3.7 3.8 5.8 4.2 4.2	4.2 4.2 5.7 7.8 7.8	8.7 8.1 10.1 9.0 9.5 11.0 10.6 13.2 11.8 15.3								
Project total	0.8 6.6 2.9 3.7	3.7 3.8 5.8 4.2 4.2	4.2 4.2 5.7 7.8 7.8	8.7 8.1 10.1 9.0 9.5 11.0 10.6 13.2 11.8 15.3								
03.08 Development of industrial processing and manufacturing of timber products project	0.8 6.6 2.9 3.7	3.7 3.8 5.8 4.2 4.2	4.2 4.2 5.7 7.8 7.8	8.7 8.1 10.1 9.0 9.5 11.0 10.6 13.2 11.8 15.3								
Project cost	0.8 6.6 2.9 3.7	3.7 3.8 5.8 4.2 4.2	4.2 4.2 5.7 7.8 7.8	8.7 8.1 10.1 9.0 9.5 11.0 10.6 13.2 11.8 15.3								
Scaling-up cost	0.8 6.6 2.9 3.7	3.7 3.8 5.8 4.2 4.2	4.2 4.2 5.7 7.8 7.8	8.7 8.1 10.1 9.0 9.5 11.0 10.6 13.2 11.8 15.3								
Project total	0.8 6.6 2.9 3.7	3.7 3.8 5.8 4.2 4.2	4.2 4.2 5.7 7.8 7.8	8.7 8.1 10.1 9.0 9.5 11.0 10.6 13.2 11.8 15.3								

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)
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	0.6	0.6	0.6	57.7	14.4	
	Scaling-up cost				0.4	0.4	1.2	1.2	1.2	3.7	1.5	1.3	1.3	1.3	5.0	6.7	7.8	7.8	9.8	16.3	16.5	18.4	20.2	24.2	144.7	36.2		
	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	9.6	11.4	16.9	17.1	19.0	20.2	24.2	202.4	50.6		
	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	1.0	1.0	1.0	20.0	5.0	
	Scaling-up cost				0.4	0.4	1.2	1.2	1.2	1.7	1.5	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	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	3.2	3.2	3.3	3.3	3.5	5.7	6.0	6.3	6.6	7.9	73.7	18.4		
03.10 Integrated upscaling of industrial and outgrower tree plantations and expansion of wood processing for export project	Project cost									3.5	3.5	2.3	2.3	1.7	0.8	0.8	0.8	0.8	0.6	0.6	0.6	0.6	0.6	0.6	0.6	18.8	4.7	
	Scaling-up cost				4.6	2.6	2.5	2.4	2.4	2.5	1.5	0.2	0.1	1.1	1.5	2.1	3.8	4.7	4.4	5.1	7.2	5.7	7.0	6.3	7.6	56.0	14.0	
	Theme total				4.6	2.6	2.5	2.4	2.4	4.5	1.5	0.2	0.1	1.1	3.6	3.8	4.7	4.4	5.1	7.2	5.7	7.0	6.3	7.6	74.9	18.7		
	Project cost																											
	Scaling-up cost																											
	Project total																											
T5 Institutional development	Project cost	46.1	58.2	54.9	56.5	49.9	49.1	45.7	45.1	45.1	44.9	47.0	44.9	44.9	44.9	44.9	44.9	44.0	44.0	42.6	44.7	42.6	42.6	42.6	1,160.1	290.0		
	Scaling-up cost	2.0	2.0	2.0	3.0	3.0	3.0	4.0	4.1	4.1	4.1	4.5	3.9	3.4	3.4	3.4	3.4	3.5	6.5	6.7	7.2	10.5	11.1	11.7	12.3	14.7	134.6	33.7
	Theme total	46.1	60.2	56.9	58.5	52.9	52.1	49.7	49.8	49.2	49.2	49.4	51.0	48.3	48.4	48.4	48.4	48.4	50.5	50.7	51.1	53.1	55.8	54.3	54.9	57.2	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	44.7	42.6	42.6	42.6	42.6	42.6	42.6	42.6	42.6	44.7	42.6	42.6	42.6	1,097.7	274.4	
	Scaling-up cost																											
	Project total	42.1	50.5	48.3	48.3	47.4	46.5	43.1	43.1	42.6	42.6	42.6	44.7	42.6	42.6	42.6	42.6	42.6	42.6	42.6	44.7	42.6	42.6	42.6	1,097.7	274.4		
03.13 Forest policy and legal framework establishment and maintenance project	Project cost	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	0.2	3.0	0.7		
	Scaling-up cost	2.0	2.0	2.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0	4.4	3.9	3.3	3.3	3.3	3.3	3.3	3.4	3.5	3.7	4.0	4.2	4.4	4.6	5.5	86.1	21.5
	Project total	1.2	2.2	2.2	3.2	3.2	3.2	4.2	4.2	4.2	4.2	4.4	3.9	3.3	3.3	3.3	3.3	3.3	3.4	3.5	3.7	4.0	4.2	4.4	4.6	5.5	89.1	22.3
03.14 Forestry institutional and human resources capacity development project	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	1.4	39.2	9.8		
	Scaling-up cost				0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	19.6	4.9	
	Project total	2.8	7.5	5.4	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	58.8	14.7	
03.15 Establishment of the South Sudan Forest Research Institute project	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	1.0	20.2	5.0		
	Scaling-up cost															3.0	3.1	3.2	3.4	3.6	3.8	4.0	4.8	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	3.0	3.1	3.2	3.4	3.6	3.8	4.0	4.8	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:	0 3 . 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: 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:

<ul style="list-style-type: none"> • Forestry Directorate: Forest Economics and Programme Department (payments would presumably be from the CAMP Master Plan Implementation Coordination Unit or another mechanism identified by it)

(2) Description of beneficiaries

<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</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"> • 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:	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

<p>(1) Other special considerations and/or notes:</p>	<ul style="list-style-type: none"> • 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): <ul style="list-style-type: none"> 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.
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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"> • 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.
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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																		
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 Field appraisal (per dlem)																												
2 Field appraisal (transportation)																												
3 Monitoring (per dlem)																												
4 Monitoring (transportation)																												
2 Procurement of administrative services (contracted)																												
3 Procurement of professional services (contracted)																												
1 International consultant (planning, detail study)																												
2 International consultant (capacity building, training)																												
3 International consultant (grant scheme 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 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)																												
Total (USD '000)																												
% to total																												

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					
	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
	<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>Vitellaria 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.</p> <p>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.</p> <p>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.</p> <p>Output: An extension plan, including support to entrepreneurship development; Plan for effectively organising communities</p> <p>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</p> <p>Output: Community management plans and overseen private management plans</p> <p>Activity 4: Implement pilot activities</p> <p>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)</p> <p>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).</p> <p>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)</p> <p>Activity 6: Promotion of outgrower schemes and other non-industrial scale smallholder log production</p> <p>Output: Provisional guidelines for outgrower arrangements and outline agreement between contracting parties; outline of incentives for outgrower schemes; workplan for technical support to outgrowers</p> <p>Activity 7: Extension support to smallholder tree planting</p> <p>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.</p> <p>Development of a promotional and/or publicity plan and materials for the programme at national and state levels.</p> <p>Output: Extension support activated for implementation of pilots; Extension materials</p> <p>Activity 8: Assistance to organization of smallholders for log production, log marketing and for eventual local community participation in smallholder processing industry</p> <p>Selection, training and deployment of promoters focused on rural organisations and enterprise management</p> <p>Assistance to creation or strengthening of groups including training, development of agreed institutional formats, "business plans", codes of behaviour</p> <p>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.</p> <p>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.</p> <p>Broad assessment of each value chain to update knowledge of size, organisation, main players, trends and their drivers, prospects and challenges.</p> <p>– 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"> <thead> <tr> <th></th> <th>Project:</th> </tr> </thead> <tbody> <tr> <td>Negative: a</td> <td>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</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> </tbody> </table>		Project:	Negative: a	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
	Project:										
Negative: a	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>(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)
(2) Explanation of expected risks:	<ul style="list-style-type: none"> • 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:	<ul style="list-style-type: none"> • 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 "<i>South Sudan Pilot Community Forestry Project – Ifwoto and Lainya Payams</i>". 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: <ul style="list-style-type: none"> In the subregion: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> funding partner could foster partnership with a lead competence in participatory forestry in own country Global knowledge: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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)
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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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03.02 Community forestry, agroforestry and smallholder plantations development 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	
1 Tools, equipment for pilot activities				164	164	164	164	164	164	164	164	164	164	164	164												1,800	450 15%
2 Provision of training services to the private sector																											20	5 0%
1 Training for stakeholders																											20	5 0%
3 Equity investments																												
4 Provision of loans																												
5 Social assistance/donation (Emergency)																												
Total (SSP '000)			870	540	929	2,183	368	368	908	530	423	908	368	908	765	780	1,086										11,932	100%
Total (USD '000)			218	135	232	546	92	92	227	132	106	227	92	227	191	195	272										2,983	
% to total			7%	5%	8%	18%	3%	3%	8%	4%	4%	8%	3%	8%	6%	7%	9%									100%		

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. 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. 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. 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: 20%; 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
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, 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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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	39/40	SSP '000 USD '000	
3 Subsidies, equity and loans						359	359	359	359	359	359	359	359	359													3,590
1 Provision of cash and/or in-kind subsidies						80	80	80	80	80	80	80	80	80													
1 Tree seedlings and sample equipment						80	80	80	80	80	80	80	80	80													
2 Provision of training services to the private sector						279	279	279	279	279	279	279	279	279													
1 Certificate-level training at KFTC for 1 month for 20 community members						180	180	180	180	180	180	180	180	180													
2 Per diem (living expenses)																											
3 Transportation for a round trip																											
4 Tuition for diploma level training abroad																											
5 10 days study tours of 5 community members to Tanzania or India						75	75	75	75	75	75	75	75	75													
6 Per diem (living expenses)																											
7 Transportation for a round trip																											
8 Other cost of study tours																											
9 Study tours of 10 community leaders/trainers within South Sudan						24	24	24	24	24	24	24	24	24													
10 Per diem (living expenses)																											
11 Transportation for a round trip																											
3 Equity investments																											
4 Provision of loans																											
5 Social assistance/donation (Emergency)																											
Total (SSP '000)						3,471	3,151	2,291	2,291	2,291	1,971	1,331	1,331	1,331	1,331												20,790
Total (USD '000)						868	788	573	573	573	493	333	333	333	333												5,198
% to total						17%	15%	11%	11%	11%	9%	6%	6%	6%	6%												100%

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

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
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>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.</p> <p>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.</p> <p>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).</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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</p>

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 data-bbox="461 1220 587 1305">Negative: a Positive: c</td> <td data-bbox="587 1180 1444 1314"> 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:	<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: center; width: 40%;">(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"> • 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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Part 3: Project cost estimation

Project duration	SSPLUSD = 4																												
	Cost group		Phase 1				Phase 2				Phase 3				Phase 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 USD	total	
1 Management and operation of project	601	601	9	8	8	8																				1,226	307	68%	
1 Deployment of government staff																													
2 Procurement of administrative services (contracted)	600	600	8	8	8																								
3 Procurement of professional services (contracted)	360																												
1 International consultant (market assessment)																													
2 Local consultant (market assessment)	240																												
3 International consultant (market development)		360																											
4 Local consultant (market development)		240																											
5 Local expert (training)			8	8	8																								
4 Implementation of staff training	1	1	1																							2	1	0%	
1 Workshop on market assessment																													
2 Workshop on market development																													
3 Preparatory meeting (institutional development)																													
4 Policy meeting (institutional development)																													
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	182					45																							
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	170					20																							
1 Motorbike for market assessment																													
2 Wagon for market assessment																													
3 Motorbike for institutional development																													
7 Procurement of equipment	12					25																							
1 ICT equipment (lap top, printer, etc) for market assessment																													
2 ICT equipment (lap top, printer, etc) for institutional development																													
3 Subsidies, equity and loans																													
1 Provision of cash and/or in-kind subsidies																													
1 Trade fair																													
2 Provision of training services to the private sector																													
1 Ad-hoc trainings for institutional development																													
3 Equity investments																													
4 Provision of loans																													
5 Social assistance/donation (Emergency)																													
Total (SSP '000)	783	601	135	129	169																								
Total (USD '000)	196	150	34	32	42																								
% to total	43%	33%	7%	7%	9%																								

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

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:	0 3 . 0 5 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:

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.

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.

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.

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.

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.

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.

(2) Objectives:

- 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:

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 "National forest resources inventory and information management" which would have commenced earlier.

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.

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) Oversight activities Implementation of project pilots in selected prioritised reserves Output: Implementation activities underway; regular and special reports on compliance; fulfilled government activities. 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) 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. Activity 14: Equipping of entire project. Output: Equipped for capacity-building activities, including in the field. 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. 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 data-bbox="450 1525 587 1576">Negative: a Positive: c</td> <td data-bbox="587 1476 1441 1619"> 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 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	General:
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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>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. • 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.

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"> • 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
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Part 3: Project cost estimation

Project duration	SSP/USD = 4												Total																	
	Cost group													% 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		
1 Management and operation of project	816	4,625	4,751	5,336	228	688	228	115	98	54	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	17,148	4,287	57%	
1 Deployment of government staff	40	40	52	52	52	52	52	52	52	52	52	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	693	173	2%	
1 Meeting with private sector (per diem)		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	486	122	2%	
2 Meeting with private sector (transportation)		7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	108	27	0%	
3 Monitoring for pilot projects (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	67	17	0%	
4 Monitoring for pilot projects (transportation)				4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	32	8	0%	
2 Procurement of administrative services (contracted)																														
3 Procurement of professional services (contracted)	774	4,583	4,583	4,961	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	15,172	3,793	51%	
1 Survey for boundaries of private sector		4,583	4,583	4,583	4,583	4,583	4,583	4,583	4,583	4,583	4,583	4,583	4,583	4,583	4,583	4,583	4,583	4,583	4,583	4,583	4,583	4,583	4,583	4,583	4,583	4,583	13,750	3,437	46%	
2 International consultant (general forest management)	504																										504	126	2%	
3 International consultant (capacity building/training)	270																										540	135	2%	
4 International consultant (advisor for watershed management)				378	378	378	378	378	378	378	378	378	378	378	378	378	378	378	378	378	378	378	378	378	378	378	378	95	1%	
4 Implementation of staff training																														
1 1- month training (per diem)				70	260	70	260	70	260	70	260	70	260	70	260	70	260	70	260	70	260	70	260	70	260	70	260	300	75	1%
2 1- month training (transportation)				60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	50	13	0%
3 3- month training (per diem)				10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	360	90	1%
4 3- month training (transportation)				180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	20	5	0%	
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 meeting	2	2	46	63	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	553	138	2%
2 Fuels for pilot sites (nature conservation)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	35	9	0%	
3 Fuels for pilot sites (watersheds + riverine forest)			43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	216	54	1%	
4 Fuels for pilot sites (concession in reserve)				17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	86	22	0%	
2 Construction of infrastructure and procurement of equipment	1,845	1,503	2,780	1,124	2,420	2,463	2,463	2,463	2,463	2,463	2,463	2,463	2,463	2,463	2,463	2,463	2,463	2,463	2,463	2,463	2,463	2,463	2,463	2,463	2,463	2,463	12,857	3,214	43%	
1 Construction of office buildings	560	2,760	1,104	2,070	2,070	2,070	2,070	2,070	2,070	2,070	2,070	2,070	2,070	2,070	2,070	2,070	2,070	2,070	2,070	2,070	2,070	2,070	2,070	2,070	2,070	2,070	8,564	2,141	29%	
1 Office room and staff houses for planning project	312																											312	78	1%
2 Offices & facilities in 10 pilot sites (nature conservation)																												2,760	690	9%
3 Offices & facilities in 4 pilot sites (nature conservation)				1,104	1,104	1,104	1,104	1,104	1,104	1,104	1,104	1,104	1,104	1,104	1,104	1,104	1,104	1,104	1,104	1,104	1,104	1,104	1,104	1,104	1,104	1,104	1,104	276	4%	
4 Offices & facilities in 5 pilot sites (nature conservation)																												4,140	1,035	14%
5 Central office and facilities	248																											248	62	1%
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	1,200	1,503	20	20	350	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	4,063	1,016	14%	
1 Pickup trucks	750																											1,500	375	5%
2 Mini-bus (S)	200																											400	100	1%
3 Mini-bus (L)																												300	75	1%
4 Truck (S)	200																											200	50	1%
5 Truck (L)																												1,500	375	5%
6 Bicycles																												3	1	0%
7 Motorbikes (for project office)																												70	18	0%
8 Motorbikes (for pilot nature reservation)	50																											20	5	0%

03.05 Multipurpose Management of Forest Reserves 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		
9 Motorbikes (for pilot watershed)					20																						20	5	0%	
10 Motorbikes (for pilot concession)						50																					50	13	0%	
7 Procurement of equipment		85	25				73																				230	58	1%	
1 ICT equipment for planning office and activities							13																				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	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	10	10	10	10	10	7,501			
% to total		9%	20%	25%	22%	9%	10%	1%	1%	0%	0%	2%	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

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:	0 3 . 0 6 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. Roads Housing and offices Equipment and field tools Nurseries and field preparation Vehicles 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 data-bbox="454 315 590 450"> Negative: b Positive: c </td> <td data-bbox="590 315 1444 450"> 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 data-bbox="454 1895 606 1924">M</td> <td data-bbox="606 1895 702 1924">L: Low</td> <td data-bbox="702 1895 798 1924">M: Medium</td> <td data-bbox="798 1895 893 1924">H: High</td> <td data-bbox="893 1895 1444 1924">(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	3,408	29,147	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%											100%	

Public sector project
 Routine work by government
 Private sector project
 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:	03.07	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 through 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>
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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 data-bbox="456 1982 592 2112"> Negative: b Positive: c </td> <td data-bbox="592 1982 1444 2112"> 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:	(Positive) <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:	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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Part 3: Project cost estimation

Project duration	Cost group	SSPLUSD = 4												Total	% 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		215	271	1,701	1,513	3,573	3,303																					10,577	2,644	74%				
1 Deployment of government staff		11	11	11	11	11	11																					68	17	0%				
1 Supervision/monitoring by central officials (per diem)		5	5	5	5	5	5																					32	8	0%				
2 Supervision/monitoring by central officials (transportation)		6	6	6	6	6	6																					36	9	0%				
2 Procurement of administrative services (contracted)		202	160	1,050	960	3,060	2,790																					8,222	2,055	57%				
3 Procurement of professional services (contracted)																												202	50	1%				
1 Consultant (fuelwood & charcoal value chain)		160			960	960																						160	40	1%				
2 Expert (fuelwood efficiency analysis)																												90	23	1%				
3 Local agents for supervision of pilot activities					90																							270	68	2%				
4 Consultant (carbon reduction/trading)						270																						2,790	1,395	39%				
5 Consultant (planning on saving campaign)																																		
6 NGOs for fuelwood saving campaign. 2 years for 3 sites																																		
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	100	640	542	502	502																											
1 Fertilizer for pilot plantation			38	38																														
2 Equipment for pilot plantation			60	60																														
3 Maintenance costs for pilot plantation				500	500	500	500																											
4 Equipment for pilot				40	40																													
5 Fuels for supervision/monitoring		2	2	2	2	2	2																											
2 Construction of infrastructure and procurement of equipment		430	125	2,561																														
1 Construction of office buildings																																		
2 Construction of research, training and other specialized buildings																																		
3 Construction of feeder roads		125	2,525																															
4 Construction of production, market and transportation facilities		125	125																															
1 Fencing for pilot plantation																																		
2 Storage shed for pilot																																		
5 Acquisition of land																																		
6 Procurement of vehicles		400		30																														
1 4WD for pilot project states		200																																
2 Track (1.5 ton)		200																																
3 Motorbikes for pilot project sites (artisanal bakeries)				30																														
7 Procurement of equipment		30		6																														
1 Chainsaws for pilot		30		6																														
3 Subsidies, equity and loans		200	236	184																														
1 Provision of cash and/or in-kind subsidies		200	236																															
1 Seedlings for pilot plantation		200	200																															
2 Artisanal bakeries for pilot project				36																														
2 Provision of training services to the private sector				184																														
1 Training on charcoal burning (100 persons, per diem)						105																												
2 Training on charcoal burning (100 persons, transportation)						70																												
3 Training on artisanal bakeries (29 persons, per diem)						3																												
4 Training on artisanal bakeries (29 persons, transportation)						6																												

03.07 Fuelwood and Charcoal Value Chains - sustainable production and efficiency improvement project (cont.)

SSP/USD = 4

Project duration 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
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																				14,313	100%
Total (USD '000)	161	149	1,124	424	893	826																				3,578	100%
% to total	5%	4%	31%	12%	25%	23%																				100%	100%

Public sector project
Routine work by government

3 Private sector project
4 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
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"> • 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.

Part 3: Project cost estimation

03.08 Development of industrial processing and manufacturing of timber products project																												
Project duration	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																												
1 Deployment of government staff		822	196	373																								
2 Procurement of administrative services (contracted)																												
3 Procurement of professional services (contracted)																												
4 Implementation of staff training																												
1 Workshop for investment promotion																												
2 Study tours to domestic saw mills (per diem)																												
3 Study tours to domestic saw mills (transportation)																												
4 Study tours abroad (per diem)																												
5 Study tours abroad (transportation)																												
6 International diploma level training (per diem)																												
7 International diploma level training (transportation)																												
8 International short term training (per diem)																												
9 International short term training (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		6,382	2,510	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	4,016	4,016	
1 Construction of office buildings																												
2 Construction of research, training and other specialized buildings																												
3 Construction of feeder roads																												
1 20 km of access road in pilot project		1,260																										
4 Construction of production, market and transportation facilities		3,428	1,482	2,117	2,117	2,117	2,117	2,370	2,370	2,370	2,370	2,370	2,370	2,370	2,370	2,370	2,370	2,370	2,370	2,370	2,370	2,370	2,370	2,370	2,370	2,370	2,370	
1 Construction of national level sawmill (2 sites)																												
2 Rehabilitation of existing national level sawmill (1 site)		1,482	1,482																									
3 Construction of pole treatment plant (1 site)		1,946																										
4 Rehabilitation of existing state level sawmill (4 sites)																												
5 Acquisition of land																												
6 Procurement of vehicles		1,637	987	1,410	1,410	1,410	1,410	1,410	1,579	1,579	1,579	1,579	1,579	1,579	1,579	1,579	1,579	1,579	1,579	1,579	1,579	1,579	1,579	1,579	1,579	1,579	1,579	
1 Vehicles for new national level sawmill																												
2 Vehicles for existing national level sawmill		987	987																									
3 Vehicles for pole treatment plant		650																										
4 Vehicles for existing state level sawmill																												
7 Procurement of equipment		57	41	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	
1 Equipment for new national level sawmill																												
2 Equipment for existing national level sawmill		41	41																									
3 Equipment for pole treatment plant		16																										
4 Equipment for existing state level sawmill																												
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)																												
Grand Total		43,312	10,828	10,828	10,828	10,828	10,828	12,200	12,200	12,200	12,200	12,200	12,200	12,200	12,200	12,200	12,200	12,200	12,200	12,200	12,200	12,200	12,200	12,200	12,200	12,200	12,200	

03.08 Development of industrial processing and manufacturing of timber products 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
Total (SSP '000)	822	6,578	2,883	3,586	3,586	3,586	3,586	3,586	4,016	4,016	4,016	4,016	4,016	4,016												44,703	100%
Total (USD '000)	205	1,644	721	896	896	896	896	896	1,004	1,004	1,004	1,004	1,004	1,004												11,176	100%
% to total	2%	15%	6%	8%	8%	8%	8%	8%	9%	9%	9%	9%	9%	9%												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:	03.09 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" data-bbox="475 656 1417 1005"> <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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Type of environment	Forest Location										
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Rain Forest margin	DRC border of Western Equatoria and Central Equatoria in Morobo (Okeyo plateau and the Morobo falls). Lainya-Wonduruba has hot springs.										
(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</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>(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:	M	L: Low	M: Medium	H: High	(select an indicator from the list)
(2) Explanation of expected risks:	• 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
(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

	Code	Abbreviation	Description	Reference
(1) Subsector area:		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

	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	
	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</p>	
<p>(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</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"> • 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:	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.	Expansion of planting (preferably by private sector) 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.

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																																																		15,729		3,932		83%																											
1 Deployment of government staff																																																		2,309		577		12%																											
1 Training sessions (trip to 10 national forests: per diem)																																																		364		91		2%																											
2 Training sessions (trip to 10 national forest: transportation)																																																		364		91		2%																											
3 Training sessions (trip to 3 industries: per diem)																																																		62		16		0%																											
4 Training sessions (trip to 3 industries/year: transportation)																																																		62		16		0%																											
5 Training sessions (trip to 20 private plantations/year: per diem)																																																		728		182		4%																											
6 Training sessions (trip to 20 private plantations/year: transportation)																																																		728		182		4%																											
2 Procurement of administrative services (contracted)																																																		7,320		1,830		39%																											
3 Procurement of professional services (contracted)																																																		1,340		335		7%																											
1 Privatisation and PPP specialist (international)																																																		1,340		335		7%																											
2 Private sector commercial plantation specialist (international)																																																		1,340		335		7%																											
3 Non-industrial small scale plantation specialist (international)																																																		1,340		335		7%																											
4 Large-scale sawmilling specialist (international)																																																		1,340		335		7%																											
5 Large-scale wood-based panel specialist (international)																																																		1,340		335		7%																											
6 Technical capacity assessment and training specialist (local)																																																		620		155		3%																											
4 Implementation of staff training																																																		3,500		875		19%																											
5 Implementation of research, studies and surveys																																																		1,750		438		9%																											
6 Delivery of extension and training services to the private sector																																																		1,750		438		9%																											
1 Large-scale sawmilling training sessions (int. consultant)																																																		200		200		200		200		200		200		200		200		200		200		200		200		200		200		200		200	
2 Large-scale wood-based training sessions (int. consultant)																																																		270		270		270		270		270		270		270		270		270		270		270		270		270		270		270		270	
7 Operation and maintenance																																																		2,600		650		14%																											
1 Utilities and communication costs																																																		80		80		80		80		80		80		80		80		80		80		80		80		80		80		80			
2 Supplies, tools and materials																																																		80		80		80		80		80		80		80		80		80		80		80		80		80		80		80			
2 Construction of infrastructure and procurement of equipment																																																		3,120		780		17%																											
1 Construction of office buildings																																																		2,600		650		14%																											
2 Construction of research, training and other specialized buildings																																																		2,600		650		14%																											
3 Construction of feeder roads																																																		2,600		650		14%																											
4 Construction of production, market and transportation facilities																																																		520		130		3%																											
5 Acquisition of land																																																		520		130		3%																											
6 Procurement of vehicles																																																		520		130		3%																											
7 Procurement of equipment																																																		520		130		3%																											
3 Subsidies, equity and loans																																																		18,849		4,712		100%																											
1 Provision of cash and/or in-kind subsidies																																																		3,468		867		18%																											
1 Tree seedlings and sample equipment																																																		240		240		240		240		240		240		240		240		240		240		240		240		240		240		240			
2 Provision of training services to the private sector																																																		867		204		4%																											
1 Text books and reference materials																																																		40		40		40		40		40		40		40		40		40		40		40		40		40		40					
3 Equity investments																																																		12%		12%		12%		12%		12%		12%		12%		12%		12%		12%		12%		12%		12%		12%					
4 Provision of loans																																																		18%		18%		18%		18%		18%		18%		18%		18%		18%		18%		18%		18%		18%		18%					
5 Social assistance/donation (Emergency)																																																		9%		9%		9%		9%		9%		9%		9%		9%		9%		9%		9%		9%		9%		9%					
Total (SSP '000)																																																		18,849		4,712		100%																											
Total (USD '000)																																																		18,849		4,712		100%																											
% to total																																																		100%		100%		100%																											

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

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 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 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:

(4) Component structure:	<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> <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>
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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:	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.
(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:										
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>(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:	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
(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
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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:	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
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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.	As for project period but plan for expansion beyond pilots.
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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				total										
	SSP				USD				'000				%				SSP				USD				'000				%				SSP				USD				'000				%				SSP				USD				'000				%				SSP				USD				'000				%				SSP				USD				'000				%				SSP				USD				'000				%		
03.11 Mainstreaming "Green-Economy" practices into forestry, forest industries and forest-based tourism project																																																																																																															
Project duration																																																																																																															
1 Management and operation of project																																																																																																															
1 Deployment of government staff																																																																																																															
1 International events (per diem)																																																																																																															
2 International events (transportation)																																																																																																															
2 Procurement of administrative services (contracted)																																																																																																															
3 Procurement of professional services (contracted)																																																																																																															
1 International consultant (green-economy intervention)																																																																																																															
2 Public communication and promotion																																																																																																															
3 International consultant (project advisor)																																																																																																															
4 International consultant (trainer)																																																																																																															
4 Implementation of staff training																																																																																																															
1 Workshops for officers (per diem)																																																																																																															
2 Workshops for officers (transportation)																																																																																																															
3 Overseas long term training (per diem)																																																																																																															
4 Overseas long term training (transportation)																																																																																																															
5 Overseas long term training (tuition)																																																																																																															
6 Log harvesting training (per diem)																																																																																																															
7 Log harvesting training (transportation)																																																																																																															
8 Annual events for policy level promotion																																																																																																															
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																																																																																																															
1 Project office with conference room																																																																																																															
2 Field office at pilot sites																																																																																																															
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 Mini-van for sensitization on climate change																																																																																																															
2 Mini-bus for school education																																																																																																															
3 Vehicles for project office																																																																																																															
4 Vehicles for pilot activities																																																																																																															
5 Motorbike for monitoring activities																																																																																																															
7 Procurement of equipment																																																																																																															
1 ICT equipment for project office																																																																																																															
2 ICT equipment for project office (pilot stage)																																																																																																															
3 Subsidies, equity and loans																																																																																																															
1 Provision of cash and/or in-kind subsidies																																																																																																															
2 Provision of training services to the private sector																																																																																																															
1 Study tour for pilot activities (per diem)																																																																																																															
2 Study tour for pilot activities (transportation)																																																																																																															

03.11 Mainstreaming “Green-Economy” practices into forestry, forest industries and forest-based tourism project (cont.)

SSP/USD = 4

Project duration 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		
3 Workshops for private sector (per diem)																													
4 Workshops for private sector (transportation)																													
3 Equity investments																													
4 Provision of loans																													
5 Social assistance/donation (Emergency)																													
Total (SSP '000)							4,590	2,588	2,498	2,368	2,498	1,526	156	118	1,057	1,534											18,930	100%	
Total (USD '000)							1,148	647	625	592	624	381	39	29	264	383												4,732	
% to total							24%	14%	13%	13%	8%	1%	1%	1%	6%	8%												100%	

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

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 Activity 8: Design, testing and establishment of national forest resources inventory database Output: 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) Protocols for uploading and accessing information. 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 Standard reports and maps Database window created for socio-economic data organised to allow overlay/matching with forestry resource data. Database window also created for forest-based activities higher up the value-chain (processing; utilisation; markets) to interact with resource information 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. 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: 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. 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) Activity 10: Integrate into each of the components 1 to 4 its own on the job training 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) Activity 11: Long-term training needs assessment and execution for the inventory and database functions. Output: 3 diploma level local; 3 diploma level abroad; 2 undergraduate degree-level abroad; 1 postgraduate abroad 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 data-bbox="454 1391 590 1534">Negative: a Positive: c</td> <td data-bbox="590 1391 1444 1534"> 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>Vitellera 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	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																									
1 Management and operation of project																																																				
1 Deployment of government staff																																																				
1 National government officers' travel cost to state and CFRs	285	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	1,090,371	272,593																								
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																								
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	1,152	288																									
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	3,840	960																									
2 Procurement of administrative services (contracted)																																																				
3 Procurement of professional services (contracted)																																																				
1 Technical expert (senior level)	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 Technical expert (two middle 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	2,400	600																									
3 GIS specialist (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	4,200	1,050																									
4 GIS specialist (junior 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	2,100	525																									
5 Remote sensing specialist (middle 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	1,500	375																									
6 Database advisor (senior 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	2,100	525																									
7 3 field teams: Technicians	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																									
8 3 field teams: Assistants	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																									
9 3 field teams: Enumerators	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																									
10 3 field teams: Labourers	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																									
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	5,145	1,286																									
1 Diploma level training in local institutions: 3 persons 2 years	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	72	18																									
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	2,403	601																									
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	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	534	134																									
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																																																				
1 Nationwide coverage of satellite photographs (GeoEye etc.)	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	1,056,676	264,169																									
2 Classification of forest and land use types by remote sensing	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																									
3 Nationwide coverage of aerial photography and digitising	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																									
4 Establishment of nationwide ground control points	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																									
5 Preparation of nationwide ortho-photos at 1/10,000	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																									
6 Preparation of nationwide topographical map at 1/50,000	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	307,200	76,800																									
7 Boundary surveys for all existing CFRs (1,869km)	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																									
8 Inventory of 50,000ha of CFRs (plantation and natural forests)	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																									
9 Establishment of natural forest resources database	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																									
10 Development of broad CFR and SFR forest management plan	500	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	2,000	500																									

03.12 National forest resources inventory, information and management plans project (cont.)

Project duration	SSPI/USD = 4												Total % to																	
	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	SSP '000 USD '000	total			
6 Delivery of extension and training services to the private sector																														
1 Private sector and inter-sectoral boundary demarcation (2,000km)																														
7 Operation and maintenance																														
1 Maintenance of data and resource centers and GIS lab.																														
2 Maintenance of data and resource centers and GIS lab.																														
2 Construction of infrastructure and procurement of equipment																														
1 Construction of office buildings																														
2 Construction of research, training and other specialized buildings																														
1 Data and resource centers and GIS lab.																														
3 Construction of feeder roads																														
4 Construction of production, market and transportation facilities																														
5 Acquisition of land																														
6 Procurement of vehicles																														
1 Four 4WDs																														
2 Two survey 2 ton trucks																														
3 Two ex-military 4 ton trucks																														
4 Two station wagons																														
5 Ten motor cycles																														
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)	42,107	50,483	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	42,592	42,592	42,592	1,097,671	100%
Total (USD '000)	10,527	12,621	12,077	12,085	11,843	11,637	10,781	10,781	10,648	10,648	10,648	10,648	10,648	10,648	10,648	10,648	10,648	10,648	10,648	10,648	10,648	10,648	10,648	10,648	10,648	10,648	10,648	10,648	274,418	100%
% to total	4%	5%	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%	100%	

Public sector project
 Routine work by government 3 Private sector project
 Routine work by private sector 4

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:	0313	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 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 Implementation Coordination Unit (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 data-bbox="456 1933 587 2007">Negative: a Positive: c</td> <td data-bbox="590 1924 1442 2029"> 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:	<p>M L: Low M: Medium H: High (select an indicator from the list)</p>
(2) Explanation of expected risks:	<p>Implementation of the project itself faces risk from likelihood of staff having limited experience in work on policy, design of strategies and regulations/incentives.</p>

Items	Information
	<p>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.
<p>2.9 Other special considerations and/or notes</p>	
<p>(1) Other special considerations and/or notes:</p>	<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.
<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"> • With upgraded staff capacity and institutional arrangements, government should be able to continue all the project starts

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																						
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 International consultant (legal draft)	378																										1,134	284 38%									
2 Local consultant (legal draft)	302																											378	95 13%								
3 International consultant (forest incentive)	252																												302	76 10%							
4 Local consultant (forest incentives)	202																												252	63 8%							
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	197	197	202	50 7%								
1 Meetings for legal development (per diem)																																					
2 Meetings for legal development (transportation)																																					
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	68	68	68	68	68					
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	75	75	75	75	75	75				
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	27	27	27	27	27	27				
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	27	27	27	27	27	27				
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	197	2,983	746	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	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) • None (Elements through this project) 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 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) 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 (Elements through this project) 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) All non-forestry specialised scholarships and training, plus: 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 (Elements through this project) 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 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 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 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 Implementation Coordination Unit) 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 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	
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	600																							1,800	450	5%
1 Mini bus for forestry commission	500	500	500																							500	125	1%
2 4WD for forestry commission	400	400	400																							400	100	1%
3 Pick up for forestry commission	300	300	300																							300	75	1%
4 Mini bus for Yei college	250	250	250																							250	63	1%
5 4WD for Yei college	200	200	200																							200	50	1%
6 Pick up for Yei college	150	150	150																							150	38	0%
7 Procurement of equipment	24	24	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	24	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	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	1,382	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	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	2,453	25%
% 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%	25%	

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 Acacia Seyal (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: 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:	(Positive) <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:	Management level oversight over project; in addition: <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):	Long-term staff: <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):	Paid consultants/short-term teams - general ratios: <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) Voluntary: <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 data-bbox="518 286 606 315">L</td> <td data-bbox="606 286 710 315">L: Low</td> <td data-bbox="710 286 813 315">M: Medium</td> <td data-bbox="813 286 917 315">H: High</td> <td data-bbox="917 286 1442 315">(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.
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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"> • 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
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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	% total	
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	20,170	5,042	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%	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	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													
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 NNS	
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 NNS	
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

5.1.2 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	2036/37	2037/38	2038/39	2039/40																																																																																																																								
04 Fisheries Subsector																																																																																																																																																					
P1 Pillar 1: Land and water management																																																																																																																																																					
04.01	Fisheries and aquaculture law project																																																																																																																																																				
04.04	Fisheries information and fisheries resource management systems development project																																																																																																																																																				
04.06	Routine fisheries information and resource management																																																																																																																																																				
04.17	Establishment of fisheries training and research institute project																																																																																																																																																				
04.18	Establishment of national aquaculture research and training centre project																																																																																																																																																				
04.19	Fishers and fisheries communities training project																																																																																																																																																				
P2 Pillar 2: Market access																																																																																																																																																					
04.09	Development of urban fish market infrastructure project																																																																																																																																																				
04.10	Private sector establishment of feedmills for aquaculture																																																																																																																																																				
04.11	Private sector establishment of ice production facilities																																																																																																																																																				
04.13	Development of fish landing site infrastructure project																																																																																																																																																				
04.14	Private sector promotion of value adding for local and export markets																																																																																																																																																				
04.15	South Sudan national fisheries competent authority project																																																																																																																																																				
04.16	Routine Quality Assurance and Inspection by CA																																																																																																																																																				
P3 Pillar 3: Food supply and hunger																																																																																																																																																					
04.02	Micro credit for fishing communities project																																																																																																																																																				
04.03	Prevention of HIV infection in fishing communities project																																																																																																																																																				
04.05	Private sector promotion of small scale aquaculture investment																																																																																																																																																				
04.07	Small scale aquaculture development and promotion project																																																																																																																																																				
04.08	Routine small scale aquaculture development																																																																																																																																																				
04.12	Private sector promotion of large scale commercial aquaculture																																																																																																																																																				
04.20	Private sector fisheries and aquaculture technical training project																																																																																																																																																				
04.23	States aquaculture training project																																																																																																																																																				
04.24	States fisheries services capacity development project																																																																																																																																																				
P4 Pillar 4: Agricultural research																																																																																																																																																					
04.21	Regional fisheries and aquaculture research project																																																																																																																																																				
04.22	Strengthening of fisheries and aquaculture research project																																																																																																																																																				
<p>Note: N: National government; S: State government; P: private sector PPP: Public and private sector partnership</p> <p>Legend: Public sector project Routine work by government Private sector project Routine work by private sector</p>																																																																																																																																																					
Total		459,740		114,935		150,515		37,629		2		1,510		377 NS		7		56,361		14,090 NS		0		NS		10		58,047		14,512 N		8		31,653		7,913 N		16		2,946		736 N/NS		149,228		37,307		25		10,460		2,615 NS/S		0		252		63 P		0		0		8		124,738		31,185 NS		0		0		4		13,778		3,444 N		0		N		145,797		36,449		10		60,761		15,190 NS		10		35,341		8,835 NS		0		3,000		750 P		7		36,396		9,099 NS		0		NS		0		0		0		0		15		2,060		515 NS/S		15		8,239		2,060 NS/S		0		0		14,200		3,550		20		14,200		3,550 N/NS	

5.1.3 Investment Planning Space by Subsector Area/Programme

Subsector	Subsector area/programme	Project ID	Project name	Phase												Year	SSP ('000)	USD ('000)	Responsibility									
				Phase I			Phase II			Phase III			Phase IV															
				2015/16	2016/17	2017/18	2018/19	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	2036/37	2037/38	2038/39	2039/40		
04 Fisheries Subsector	Policy and legal framework development																											
	04.01 Fisheries and aquaculture law project																											
	Public sector institution and management capacity development																											
	04.15 South Sudan national fisheries competent authority project																											
	04.16 Routine Quality Assurance and Inspection by CA																											
	04.17 Establishment of fisheries training and research institute project																											
	04.18 Establishment of national aquaculture research and training centre project																											
	04.21 Regional fisheries and aquaculture research project																											
	04.22 Strengthening of fisheries and aquaculture research project																											
	04.23 States aquaculture training project																											
	04.24 States fisheries services capacity development project																											
	Public infrastructure development																											
	04.09 Development of urban fish market infrastructure project																											
	04.13 Development of fish landing site infrastructure project																											
	Private sector projects and businesses																											
	04.05 Private sector promotion of small scale aquaculture investment																											
	04.10 Private sector establishment of feedmills for aquaculture																											
	04.11 Private sector establishment of ice production facilities																											
	04.12 Private sector promotion of large scale commercial aquaculture																											
	04.14 Private sector promotion of value adding for local and export markets																											
	04.20 Private sector fisheries and aquaculture technical training project																											
	Fisheries management and productivity enhancement																											
	04.02 Micro credit for fishing communities project																											
	04.03 Prevention of HIV infection in fishing communities project																											
	04.04 Fisheries information and fisheries resource management systems development project																											
	04.06 Routine fisheries information and resource management																											
	04.19 Fishers and fisheries communities training project																											
	Aquaculture production and productivity enhancement																											
	04.07 Small scale aquaculture development and promotion project																											
	04.08 Routine small scale aquaculture development																											

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	4112.1	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	8485.3	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 29.0 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	404.2	101.0						
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	501.8	125.4						
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						
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						
Project cost	0.1 0.5 0.5 0.7	0.7 1.0 1.0 1.0 1.0	1.8 1.5 1.3 1.3 1.3	2.2 2.2 2.3 2.4 2.5 2.7 2.8 3.0 3.1 3.7	41.9	10.5						
Scaling-up cost	0.8 0.8 0.5 0.5 0.7	0.7 1.0 1.0 1.0 1.0	1.8 1.5 1.3 1.3 1.3	2.2 2.2 2.3 2.4 2.5 2.7 2.8 3.0 3.1 3.7	60.8	15.2						
Project total	0.8 0.8 0.5 0.5 0.7	0.7 1.0 1.0 1.0 1.0	1.8 1.5 1.3 1.3 1.3	2.2 2.2 2.3 2.4 2.5 2.7 2.8 3.0 3.1 3.7	235.0	58.8						
04.02 Micro credit for fishing communities 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	295.8	73.9						
Project cost	0.1 0.5 0.5 0.7	0.2 0.4 0.4 0.4 0.4	0.4 0.4 3.3 3.3 3.3	3.3 13.8 14.3 14.7 19.0 20.2 30.8 32.4 34.0 40.5	35.3	8.8						
Scaling-up cost	0.8 0.8 0.5 0.5 0.7	0.7 1.0 1.0 1.0 1.0	1.8 1.5 1.3 1.3 1.3	2.2 2.2 2.3 2.4 2.5 2.7 2.8 3.0 3.1 3.7	128.7	32.2						
Project total	0.8 0.8 0.5 0.5 0.7	0.7 1.0 1.0 1.0 1.0	1.8 1.5 1.3 1.3 1.3	2.2 2.2 2.3 2.4 2.5 2.7 2.8 3.0 3.1 3.7	164.1	41.0						
04.03 Prevention of HIV infection in fishing communities 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	95.8	23.9						
Project cost	0.1 0.5 0.5 0.7	0.2 0.4 0.4 0.4 0.4	0.4 0.4 3.3 3.3 3.3	3.3 13.8 14.3 14.7 19.0 20.2 30.8 32.4 34.0 40.5	227.3	56.8						
Scaling-up cost	0.8 0.8 0.5 0.5 0.7	0.7 1.0 1.0 1.0 1.0	1.8 1.5 1.3 1.3 1.3	2.2 2.2 2.3 2.4 2.5 2.7 2.8 3.0 3.1 3.7	323.1	80.8						
Project total	0.8 0.8 0.5 0.5 0.7	0.7 1.0 1.0 1.0 1.0	1.8 1.5 1.3 1.3 1.3	2.2 2.2 2.3 2.4 2.5 2.7 2.8 3.0 3.1 3.7	56.4	14.1						
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 5.1	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 5.1	0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	227.3	56.8						
Scaling-up 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 5.1	0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	323.1	80.8						
Theme total	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 5.1	0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	56.4	14.1						
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 5.1	0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	140.8	35.2						
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 5.1	0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	197.2	49.3						
Scaling-up 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 5.1	0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	3.0	0.8						
Project total	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 5.1	0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	135.5	34.4						
04.05 Private sector promotion of small scale aquaculture investment	0.2 0.2 0.2 0.2 0.2	0.2 0.2 0.2 0.2 0.2	0.1 0.2 0.3 0.5	0.9 0.9 0.9 1.0 1.0 1.4 1.5 1.6 2.3 2.7	16.5	4.1						
Project cost	0.2 0.2 0.2 0.2 0.2	0.2 0.2 0.2 0.2 0.2	0.1 0.2 0.3 0.5	0.9 0.9 0.9 1.0 1.0 1.4 1.5 1.6 2.3 2.7								
Scaling-up cost	0.2 0.2 0.2 0.2 0.2	0.2 0.2 0.2 0.2 0.2	0.1 0.2 0.3 0.5	0.9 0.9 0.9 1.0 1.0 1.4 1.5 1.6 2.3 2.7								
Project total	0.2 0.2 0.2 0.2 0.2	0.2 0.2 0.2 0.2 0.2	0.1 0.2 0.3 0.5	0.9 0.9 0.9 1.0 1.0 1.4 1.5 1.6 2.3 2.7								
04.06 Routine fisheries information and resource management												
Project cost												
Scaling-up cost												
Project total												
04.07 Small scale aquaculture development and promotion project		4.8 4.7 5.3	6.5 5.1 5.0 5.0		36.4	9.1						
Project cost		4.8 4.7 5.3	6.5 5.1 5.0 5.0		73.0	18.2						
Scaling-up cost		0.4 0.5 0.6 4.5	0.4 0.5 0.6 4.5	5.0 4.7 4.9 5.1 5.9 6.3 7.6 8.2 8.6 11.0	109.4	27.3						
Project total		4.8 4.7 5.3	6.5 5.4 5.4 5.6 4.5	5.0 4.7 4.9 5.1 5.9 6.3 7.6 8.2 8.6 11.0								
04.08 Routine small scale aquaculture development												
Project cost												
Scaling-up cost												
Project total												
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	35.2	8.8						
Scaling-up cost	1.1 0.4 0.4 0.4 0.4	0.4 0.4 0.8 0.8 1.4	1.2 1.1 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	48.0	11.5						
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								

Subsector	Development Theme	Project ID	Project name	SSP/USD = 4.00												SSP (million)	USD (million)			
				Phase I	Phase II	Phase III	Phase IV	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38			38/39	39/40	
			04.09 Development of urban fish market infrastructure project	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	10.5	2.6
			Project cost																	
			Scaling-up 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	10.5	2.6
			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	10.5	2.6
			04.10 Private sector establishment of feedmills for aquaculture																	
			Project cost																	
			Scaling-up cost		0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.1
			Project total		0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.1
			04.11 Private sector establishment of ice production facilities																	
			Project cost																	
			Scaling-up cost																	
			Project total																	
			04.12 Private sector promotion of large scale commercial aquaculture																	
			Project cost																	
			Scaling-up cost																	
			Project total																	
			T4 Agriculture sector transformation																	
			Project cost																	
			Scaling-up cost																	
			Theme total																	
			Project cost																	
			Scaling-up cost																	
			Project total																	
			04.13 Development of fish landing site infrastructure project																	
			Project cost																	
			Scaling-up cost																	
			Project total																	
			04.14 Private sector promotion of value adding for local and export markets																	
			Project cost																	
			Scaling-up cost																	
			Project total																	
			04.15 South Sudan national fisheries competent authority project																	
			Project cost																	
			Scaling-up cost																	
			Project total																	
			04.16 Routine Quality Assurance and Inspection by CA																	
			Project cost																	
			Scaling-up cost																	
			Project total																	
			T5 Institutional development																	
			Project cost																	
			Scaling-up cost																	
			Theme total																	
			Project cost																	
			Scaling-up cost																	
			Project total																	
			04.17 Establishment of fisheries training and research institute project																	
			Project cost																	
			Scaling-up cost																	
			Project total																	
			04.18 Establishment of national aquaculture research and training centre project																	
			Project cost																	
			Scaling-up cost																	
			Project total																	
			04.19 Fishers and fisheries communities training 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)	(million)		
04.20 Private sector fisheries and aquaculture technical training project																													
Project cost																													
Scaling-up cost																													
Project total																													
04.21 Regional fisheries and aquaculture research project																													
Project cost																													
Scaling-up cost																													
Project total																													
04.22 Strengthening of fisheries and aquaculture research project																													
Project cost																													
Scaling-up cost																													
Project total																													
04.23 States aquaculture training project																													
Project cost																													
Scaling-up cost																													
Project total																													
04.24 States fisheries services capacity development project																													
Project cost																													
Scaling-up cost																													
Project total																													
Subsector 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)

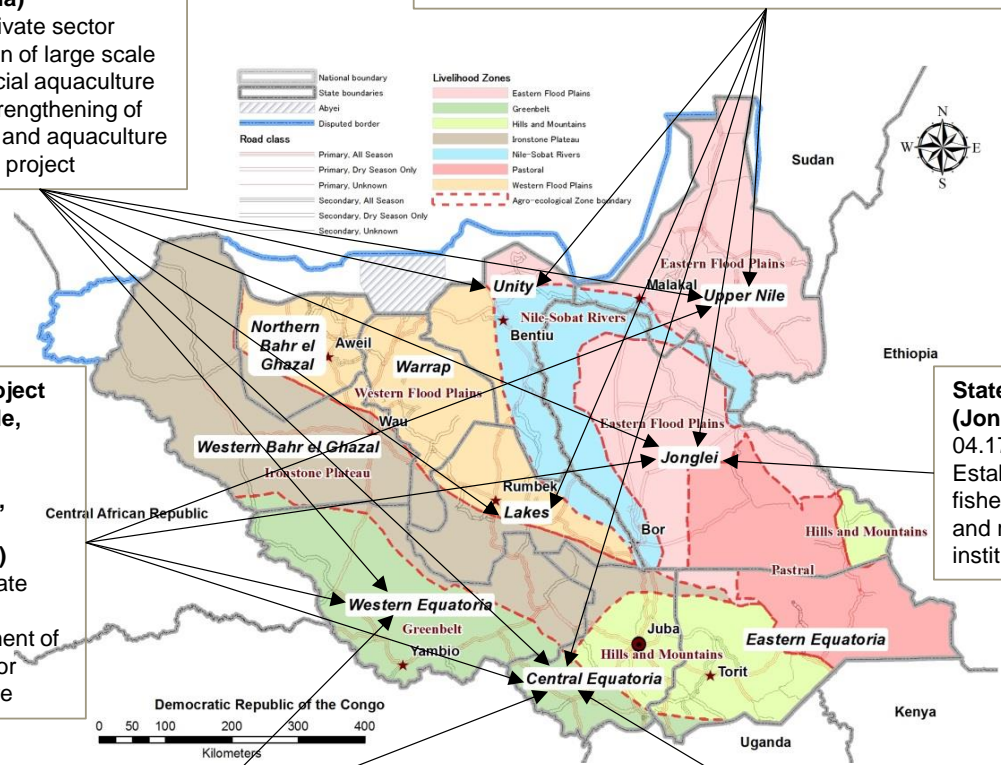
- 04.17 Establishment of fisheries training and research institute project

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" style="width: 100%;"> <tr> <td style="width: 30%; vertical-align: top;"> Negative: a Positive: d </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: 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																												
	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	795	703																									1,497	374	99%
1 Deployment of government staff																													
2 Procurement of administrative services (contracted)																													
1 Print (& distribution) of the first draft																													
2 Print (& distribution) of the final version																													
3 Procurement of professional services (contracted)																													
1 International consultant (law expert)																													
2 Local consultant (law assistant)																													
4 Implementation of staff training																													
1 Workshops in 3 states (per diem)																													
2 Juba workshop (venue)																													
3 Juba Validation Workshop (per diem)																													
4 Juba Validation Workshop (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	13																												
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	13																												
1 PC																													
2 Printer																													
3 Copier																													
4 Software																													
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																											
Total (USD '000)	202	176																											
% to total	53%	47%																											

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:	0 4 . 0 2 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
	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	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	
	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

(1) Other special considerations and/or notes:	<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

(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 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	Phase 1		Phase 2				Phase 3				Phase 4				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	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 (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:	04.03 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 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
	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	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
Part 2: Project description	
2.1 Project justification, objectives, overall description and component structure	
(1) Justification:	<p>This is a project for a targeted HIV and AIDS awareness campaign for:</p> <ul style="list-style-type: none"> • 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. <p>General awareness of HIV countrywide should be covered by national programs.</p> <p>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.</p> <p>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.</p> <ul style="list-style-type: none"> • 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. <p>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)</p> <p>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.</p> <p>CAMP has found that within GRSS MLFI and SMARFs there is widespread ignorance of HIV.</p> <p>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</p>

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>

Part 3: Project cost estimation

Cost group	SSPIUSD = 4													Total																																																			
	Phase 1				Phase 2				Phase 3				Phase 4					SSP '000 USD '000	% 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																																								
04.03 Prevention of HIV infection in fishing communities project																																																																	
Project duration																																																																	
1 Management and operation of project																																																																	
1 Deployment of government staff																																																																	
2 Procurement of administrative services (contracted)																																																																	
3 Procurement of professional services (contracted)	771	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840			35,331	8,833	100%																																
1 International consultant (project officer)																																																																	
2 project assistant (for procurement, monitoring & evaluation)	756	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840			35,331	8,833	100%																													
3 Peer education programme (by contracted NGO)	15	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	756	189	2%																															
4 Implementation of staff training	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	32,400	8,100	92%																														
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	10																																																																
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	10																																																																
1 Office ICT equipment	10																																																																
3 Subsidies, equity and loans																																																																	
1 Provision of cash and/or in-kind subsidies	781	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840																																	
2 Provision of training services to the private sector	195	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960																								
3 Equity investments	2%	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%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%																										
4 Provision of loans																																																																	
5 Social assistance/donation (Emergency)																																																																	
Total (SSP '000)	781	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840	3,840																											
Total (USD '000)	195	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960																											
% to total	2%	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%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%																											

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

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:	0 4 . 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: 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" 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
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:	International TA providing technical and management expertise supporting and mentoring MLFI and states' staff
(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" 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"> • 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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04.04 Fisheries information and fisheries resource management systems development project (cont.)

SSP/USD = 4

Project duration	Cost group	Phase 1												Phase 2					Phase 3					Phase 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				
2	Utilities for whole project	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																			50	13	0%	
4	Maintenance for bile for data collection activities(2)	4	4	4	4	4	4	4	4	4																			23	6	0%	
5	Uniforms					6																							6	2	0%	
2	Construction of infrastructure and procurement of equipment	1,151	2,030	880	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																											100	25	0%	
	3 Vehicle for team experts	300				300																							600	150	1%	
	4 Motorbikes for enumerators	150																											300	75	1%	
	5 Vehicle for team experts	300				300																							600	150	1%	
	6 Vehicle for MCS specialist	150																											150	38	0%	
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	30	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	87																							877	219	2%	
1	Provision of cash and/or in-kind subsidies																															
	1 Start-up costs for SSFO			35	35	35																								105	26	0%
2	Provision of training services to the private sector	52	266	176	176	52																							772	193	1%	
	1 Per diem,etc for training of fishers, processors and traders	25	25	25	25	25																							150	38	0%	
	2 Per diem,etc for training of community leaders and chiefs	15	15	15	15	15																							90	23	0%	
	3 Transportation for training of community leaders and chiefs	3	3	3	3	3																							20	5	0%	
	4 Per diem,etc for discussions with community leaders	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																								360	90	1%	
	8 Transportation for training for (states offices and) community leaders		4	4	4																								12	3	0%	
3	Equity investments																															
4	Provision of loans																															
5	Social assistance/donation (Emergency)																															

04.04 Fisheries information and fisheries resource management systems development 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)	6,064	8,737	10,902	10,621	7,457	6,389	6,190																						56,361	100%
Total (USD '000)	1,516	2,184	2,726	2,655	1,864	1,597	1,548																						14,090	100%
% to total	11%	16%	19%	19%	13%	11%	11%																							

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
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 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 (<i>Clarius gariepinus</i> – the African cat fish and <i>Oreochromis niloticus</i> -the Nile tilapia) are both technologically suitable and native species to South Sudan.</p> <p>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.</p> <p>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.</p> <p>Elsewhere in Africa fish subsistence farming families have achieved a range of benefits including:</p> <ul style="list-style-type: none"> • 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. <p>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.</p> <p>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.</p> <p>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.</p> <p>Aquaculture development in South Sudan will take three paths:</p> <ul style="list-style-type: none"> • 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. <p>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.</p>

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):	<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"> 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>Clarius 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 data-bbox="454 1639 590 1787">Negative: b Positive: c</td> <td data-bbox="590 1639 1444 1787"> 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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04.07 Small scale aquaculture development and promotion 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 Feed growout											72	72	72														216	54	1%
3 Seine nets for harvesting large ponds									24																		24	6	0%
4 Seine nets for harvesting small ponds									16																		16	4	0%
2 Provision of training services to the private sector									20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	120	30	0%
1 Training of fish farmers									20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	120	30	0%
3 Equity investments																													
4 Provision of loans																													
5 Social assistance/donation (Emergency)																													
Total (SSP '000)									4,813	4,739	5,259	6,518	5,100	4,976	4,991												36,396		100%
Total (USD '000)									1,203	1,185	1,315	1,629	1,275	1,244	1,248												9,099		100%
% to total									13%	13%	14%	18%	14%	14%	14%														

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

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:	0 4 . 0 9 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:	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 Construction companies: build the various markets
(2) Description of beneficiaries within the framework of the project:	Construction companies: contracts Fishers and fishing communities: increase in value of catch, less wastage 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 Municipalities: hygienic fish market in town. Raised revenues from hire of stalls etc Consumers: better quality fish available. Better nutrition.

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

(1) Outcomes and impact:	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. Nutrition, protein availability in urban areas. Employment, better conditions of work
(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 data-bbox="454 1724 587 1865">Negative: a Positive: b</td> <td data-bbox="587 1724 1444 1865">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 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:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px 10px;">L</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>	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 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
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>All routine operation will be the responsibility of the municipality where the markets are situated. 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>

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													740	185	7%															
1 Deployment of government staff																														
2 Procurement of administrative services (contracted)																														
3 Procurement of professional services (contracted)																														
1 Deasing of facilities																														
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	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	9,720	2,430	93%	
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	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	9,720	2,430	93%	
1 Construction of 9 fresh fish market	216	216	216	216	216	216	216	216	216	216	216	216	216	216	216	216	216	216	216	216	216	216	216	216	216	216	216	5,400	1,350	52%
2 Construction of 9 fry fish market	173	173	173	173	173	173	173	173	173	173	173	173	173	173	173	173	173	173	173	173	173	173	173	173	173	173	4,320	1,080	41%	
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)	1,129	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	10,460		100%	
Total (USD '000)	282	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	2,615			
% to total	11%	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%	100%			

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

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>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"> • 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:	Number of feedmills producing feed for aquaculture There are currently none in South Sudan
(2) Measurable indicators and situation at the end point:	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.
(3) Methods of measurement and sources of information:	Inspection and licensing Feedmill company reports MLFI annual reports Import statistics

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;"> <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:	<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.
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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.	Private Sector activity.
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Part 3: Project cost estimation

04.10 Private sector establishment of feedmills for aquaculture		SSP/USD = 4																												
		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	total	
Project duration																														% to
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 (for feasibility study)																													
	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																													
	2 Provision of training services to the private sector																													
	3 Equity investments																													
	4 Provision of loans																													
	5 Social assistance/donation (Emergency)																													
	Total (SSP '000)																													252
	Total (USD '000)																													63
	% to total																													100%
																														252
																														63
																														100%
																														100%

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		
	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		
2.3 Service providers and beneficiaries			
(1) Description of service providers within the framework of the project:	Banks providing loan funds Equipment suppliers (India and China mainly)		
(2) Description of beneficiaries within the framework of the project:	Fishermen Fish traders and retailers Fish exporters Drinks sellers and other ice users (see other users of ice above)		
2.4 Outcomes, impact and contributions to value added (i.e. economic growth)			
(1) Outcomes and impact:	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.		
(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>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"> • 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.					

Part 3: Project cost estimation

Project duration	SSP/USD = 4												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		
04.11 Private sector establishment of ice production facilities																													
1 Management and operation of project																													
1 Deployment of government staff																													
2 Procurement of administrative services (contracted)																													
3 Procurement of professional services (contracted)																													
4 Implementation of staff training																													
5 Implementation of research, studies and surveys																													
6 Delivery of extension and training services to the private sector																													
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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)																													
4 Private sector co-finance (Ice machine (25 tonnes/day) x 40 units . 1,500,000 SSP/ unit, and Water treatment equipment x 40 units . 210,000 SSP/ unit)																													
Total (SSP '000)	2,736	2,736	2,736	2,736	2,736	2,736	2,736	2,736	2,736	2,736	2,736	2,736	2,736	2,736	2,736	2,736	2,736	2,736	2,736	2,736	2,736	2,736	2,736	2,736	2,736	2,736	2,736	2,736	
Total (USD '000)	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684	684	
% to total	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%	4%	4%	

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

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 data-bbox="454 1344 590 1478">Negative: c Positive: c</td> <td data-bbox="590 1344 1444 1478"> 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
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

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.

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.

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.

To achieve economic growth in the capture sector there will be three thrusts of development:

- 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

Fish landing sites in strategic areas will assist in all three areas of economic growth, by allowing

- 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.

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.

Some staff training will be included in the project to ensure proper management of the landing sites after handover.

(2) Objectives:

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.

The short term objective is to build 9 fish landing sites in the Nile-Sobat Rivers Livelihood Zone.

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

The project seeks to establish 9 simple fish landing sites, each with a small jetty or quay suitable to the location.

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.

Although designs will vary slightly between locations, the basic installation will be the

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"> <tr> <td>Negative: b</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: 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 aways, 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:	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)
(2) Measurable indicators and situation at the end point:	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.
(3) Methods of measurement and sources of information:	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.
(4) Responsible parties for the monitoring and evaluation:	Project and CAMP Implementation Unit MLFI States administrations National Bureau of Standards and/or Competent Authority – export figures from certification scheme Customs – export figures

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):	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 Implementation Unit – oversight of project. Routine function
(3) Required human resources in the private sector including	1 international TA. Project manager. Civil engineer. 40 months over the project. Qualified civil engineer with 15 years experience in Africa. Regionally based.

Items	Information
consultants (positions, qualification and numbers):	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:	<table border="1"> <tr> <td data-bbox="518 315 606 342">H</td> <td data-bbox="606 315 694 342">L: Low</td> <td data-bbox="694 315 782 342">M: Medium</td> <td data-bbox="782 315 869 342">H: High</td> <td data-bbox="869 315 1444 342">(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"> • 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:	<p>The simplicity of the design of the landing sites means that recurrent costs should be kept to a minimum.</p> <p>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.</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 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

Part 3: Project cost estimation

Project duration	SSP/USD = 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 On site training (per diem)																												
2 On site training (transportation)																												
2 Procurement of administrative services (contracted)																												
3 Procurement of professional services (contracted)																												
1 International consultant (adviser)																												
2 Local consultant (technical assistance)																												
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																												
1 Fisheries Landing Sites (9 places)																												
5 Acquisition of land																												
6 Procurement of vehicles																												
1 4WD																												
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

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.</p> <p>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:

<p>The service providers will be:</p> <ul style="list-style-type: none"> • 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>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: 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:	(Negative) <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). (Positive) <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
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Part 2: Project description

2.1 Project justification, objectives, overall description and component structure

(1) Justification:

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

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.

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.

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:

- Country Health Approval
- Approved establishments
- Health certification
- Health control.

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.

The problems that the project is designed to overcome are:

- 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:

- 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:

The project seeks to strengthen the competent authority which has the responsibility for fish quality assurance in South Sudan

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

Items	Information
	<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)
(4) Component structure:	<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	Phase 1		Phase 2			Phase 3				Phase 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	%
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	
% to total										27%	33%	25%	16%														100%		

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) 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"> <tr> <td data-bbox="454 1612 598 1758">Negative: b Positive: c</td> <td data-bbox="598 1612 1444 1758"> <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: 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: b 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>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> <ul style="list-style-type: none"> 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) <p>(This is an increase of 1 lecturer and 1 administrative assistant)</p> <p>Un-established staff</p> <ul style="list-style-type: none"> 2 boatman/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):	<ul style="list-style-type: none"> 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. 1 locally recruited national technical manager to work with the CAMP Implementation Unit in MLFI (4 years). Graduate with suitable experience in project administration 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 1 Adviser curriculum development. Suitable experience and qualifications 8 months

Items	Information
	<p>(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:	M	L: Low	M: Medium	H: High	(select an indicator from the list)
(2) Explanation of expected risks:	<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>
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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 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>
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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)</p> <p>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</p> <p>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.</p> <p>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)

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
04.17 Establishment of fisheries training and research institute project																										
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 (adviser for pre-construction & construction)																										
2 Local consultant (technical manager)																										
3 International consultant (adviser to manager of the centre)																										
4 International consultant (adviser & lecturer)																										
5 International consultant (handling & processing)																										
6 International consultant (curriculum development)																										
4 Implementation of staff training																										
1 International training for staff in centre (per diem)																										
2 International training for staff in centre (transportation)																										
3 International training for staff in centre (tuition)																										
4 Regional training for staff in centre (per diem)																										
5 Regional training for staff in centre (transportation)																										
6 Regional training for staff in centre (tuition)																										
5 Implementation of research, studies and surveys																										
6 Delivery of extension and training services to the private sector																										
7 Operation and maintenance																										
1 Fuels, materials, etc for initial operation																										
2 Utilities, communications for initial operation																										
2 Construction of infrastructure and procurement of equipment																										
1 Construction of office buildings																										
2 Construction of research, training and other specialized buildings																										
1 Renovation and construction of facilities																										
3 Construction of feeder roads																										
4 Construction of production, market and transportation facilities																										
5 Acquisition of land																										
6 Procurement of vehicles																										
1 Pickup for start-up																										
2 Motorbike for start-up																										
3 4WD for TA																										
4 Pickup for TA																										
7 Procurement of equipment																										
1 Office ICT equipment																										
2 Equipment for training																										
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)																										
1 Management and operation of project																									35,868	8,967 66%
1 Deployment of government staff																									33,138	8,284 61%
2 Procurement of administrative services (contracted)																									7,560	1,890 14%
3 Procurement of professional services (contracted)																									3,024	756 6%
1 International consultant (adviser for pre-construction & construction)																									9,072	2,268 17%
2 Local consultant (technical manager)																									9,072	2,268 17%
3 International consultant (adviser to manager of the centre)																									1,890	473 3%
4 International consultant (adviser & lecturer)																									2,520	630 5%
5 International consultant (handling & processing)																									1,230	308 2%
6 International consultant (curriculum development)																									730	183 1%
4 Implementation of staff training																									32	8 0%
1 International training for staff in centre (per diem)																									120	30 0%
2 International training for staff in centre (transportation)																									180	45 0%
3 International training for staff in centre (tuition)																									48	12 0%
4 Regional training for staff in centre (per diem)																									120	30 0%
5 Regional training for staff in centre (transportation)																										
6 Regional training for staff in centre (tuition)																										
5 Implementation of research, studies and surveys																										
6 Delivery of extension and training services to the private sector																										
7 Operation and maintenance																									1,500	375 3%
1 Fuels, materials, etc for initial operation																									900	225 2%
2 Utilities, communications for initial operation																									600	150 1%
2 Construction of infrastructure and procurement of equipment																									18,273	4,568 34%
1 Construction of office buildings																										
2 Construction of research, training and other specialized buildings																									14,300	3,575 26%
1 Renovation and construction of facilities																									14,300	3,575 26%
3 Construction of feeder roads																										
4 Construction of production, market and transportation facilities																										
5 Acquisition of land																										
6 Procurement of vehicles																									510	128 1%
1 Pickup for start-up																									150	38 0%
2 Motorbike for start-up																									10	3 0%
3 4WD for TA																									200	50 0%
4 Pickup for TA																									150	38 0%
7 Procurement of equipment																									3,463	866 6%
1 Office ICT equipment																									13	3 0%
2 Equipment for training																									3,450	863 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)																										

04.17 Establishment of fisheries training and research institute project (cont.)

Project duration	SSP/USD = 4												Total SSP '000 USD '000	% to 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	Total	% to total
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	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	13,535	100%
% 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%	100%	

Public sector project
Routine work by government

Private sector project
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:	0 4 . 1 8 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. Component 2: Construction and equipment provision Component 3: Transfer of MLFI DoFAD aquaculture staff to Aquaculture Centre Component 4: Capacity development</p>

Items	Information
	Component 5: Financing
2.2 Detailed description of project component, activity and outputs	
(1) Component, activity and outputs:	<p>Component 1: 2 years. Pre-construction</p> <p>Activity 1.1: Appoint project manager for pre-construction and construction components, to work with CAMP Implementation Unit and on site during construction (2 years over 5 years, 6 visits).</p> <p>Activity 1.2: Affirmation of political buy in at national and state level.</p> <p>Activity 1.3: Site identification, probably at or near Yeï in the Greenbelt Livelihood Zone. Attached to existing institutions if the soil types and hydrography are suitable. Site surveys.</p> <p>Activity 1.4: Confirmation of site location and size and removal of any land issues. Obtain necessary permissions and permits.</p> <p>Activity 1.5: Undertake environmental impact assessment (EIA). Local company through prudent shopping process.</p> <p>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</p> <p>Activity 1.7: Design work carried out including detailed plans and bills of quantities</p> <p>Activity 1.8: Tender process for civil works. Award of tender.</p> <p>Activity 1.9: Preparation of equipment list</p> <p>Activity 1.10: Tender process for equipment for the centre. Award of tender</p> <p>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</p> <p>Component 2: 3 years. Construction and equipment provision</p> <p>Activity 2.1: Build the National Aquaculture Training and Research Centre.</p> <p>Activity 2.2: Supervision and quality control of building process</p> <p>Activity 2.3: Delivery and installation of basic equipment</p> <p>Outputs: Construction and equipping of the Aquaculture Centre is effected</p> <p>Component 3: Transfer of MLFI DoFAD aquaculture staff to Aquaculture Centre</p> <p>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.</p> <p>Outputs: The current aquaculture staff within the MLFI are transferred to the Aquaculture Centre providing the cadre of aquaculture specialists for the centre.</p> <p>Component 4: 3 years. Capacity development for the National Aquaculture Training and Research centre</p> <p>Activity 4.1: Provide fellowships and attachments at academic institutions regionally and internationally and further training for the staff of the Aquaculture Centre</p> <p>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.</p> <p>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.</p> <p>Activity 4.4: Develop training courses and NVQs appropriate to the aquaculture needs of the country</p> <p>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</p> <p>Component 5: Financing 3 years running concurrent with Component 3</p> <p>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.</p> <p>Outputs: Funding enables the centre to operate during its first years whilst developing sources of revenue and ensuring states' and national recurrent funding.</p>
2.3 Service providers and beneficiaries	
(1) Description of service providers within the framework of the project:	<p>Consulting engineers</p> <p>Environment company</p> <p>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):	<p>Negative: b Positive: c</p> <p>Project:</p> <ul style="list-style-type: none"> 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 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. • There are no standards for fish feed in South Sudan. These will be developed as the 				

Items	Information
	<p>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</p> <ul style="list-style-type: none"> • 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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Part 3: Project cost estimation

Project duration	SSP/USD = 4																			Total	% to total						
	Cost group																										
	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 total
1 Management and operation of project																											
1 Deployment of government staff																											
1 Site inspection survey (per diem)																											
2 Site inspection survey (transportation)																											
2 Procurement of administrative services (contracted)																											
1 Preparation (design, procurement, EIA and etc.)																											
3 Procurement of professional services (contracted)																											
1 International consultant (project manager: construction)																											
2 International consultant (adviser to the aquaculture manager)																											
3 International consultant (adviser to hatchery manager)																											
4 International consultant (adviser for growout)																											
5 International consultant (short term)																											
4 Implementation of staff training																											
1 Fellowships (per diem)																											
2 Fellowships (transportation)																											
3 Fellowships (tuition)																											
4 Regional training (per diem)																											
5 Regional training (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 site inspection																											
2 Fuels for TA period																											
3 Consumables for TA period																											
4 Supplies and communication for TA period																											
2 Construction of infrastructure and procurement of equipment																											
1 Construction of office buildings																											
2 Construction of research, training and other specialized buildings																											
1 Buildings for centre																											
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 project manager																											
2 4WD for TA																											
3 Pick up for TA																											
4 Motorbike for TA																											
7 Procurement of equipment																											
1 Equipment for centre																											
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																											
Total																											

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)									1,339	605	6,088	6,088	6,088	4,565	4,195	2,683											31,653		100%
Total (USD '000)								335	151	1,522	1,522	1,522	1,141	1,049	671												7,913		
% to total								4%	2%	19%	19%	19%	14%	13%	8%											100%			

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:	0 4 . 1 9 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"> <tr> <td>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:	Number of training camps being held Number of residential courses being held Currently zero, and unlikely to be any until start of project
(2) Measurable indicators and situation at the end point:	Numbers of training camps being held Number of residential courses being held 6 camps per year 1 residential course
(3) Methods of measurement and sources of information:	Count of camps and courses held From Padak FTC records, state fisheries administrations records. MLFI records. 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.
(4) Responsible parties for the monitoring and evaluation:	Padak FTC Manager and administration Padak FTC Board of Trustees JG-MUST MLFI annual reports

2.7 Required human resources

(1) Principle of human resources management:	Routine training activity undertaken by Padak FTC
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Items	Information
(2) Required human resources in the public sector (Positions, grades and numbers):	<p>Padak Staff</p> <p>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)
(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) 				

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.
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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 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.</p> <p>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.</p> <p>Other funds will be forthcoming from a variety of sources, the private sector, DP and NGOs and international organizations.</p>
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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		
1 Management and operation of project																													
1 Deployment of government staff																													
1 Survey for identification of target groups(per diem)																													
2 Survey for identification of target groups(transportation)																													
3 Outreach training in communities (per diem)																													
4 Outreach training in communities (transportation)																													
2 Procurement of administrative services (contracted)																													
3 Procurement of professional services (contracted)																													
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 identification survey																													
2 Fuels for outreach training																													
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 Basic equipment for outreach																													
2 Equipment for identification survey																													
3 Subsidies, equity and loans																													
1 Provision of cash and/or in-kind subsidies																													
2 Provision of training services to the private sector																													
1 Outreach training in communities																													
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

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 data-bbox="454 230 598 365">Negative: a Positive: b</td> <td data-bbox="598 230 1444 365"> 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</p> <p>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 data-bbox="454 2027 598 2056">M</td> <td data-bbox="598 2027 710 2056">L: Low</td> <td data-bbox="710 2027 821 2056">M: Medium</td> <td data-bbox="821 2027 933 2056">H: High</td> <td data-bbox="933 2027 1444 2056">(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	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
<p>Part 2: Project description</p>	
<p>2.1 Project justification, objectives, overall description and component structure</p>	
<p>(1) Justification:</p>	<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>
<p>(2) Objectives:</p>	<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.
<p>(3) Overall description including temporal and spatial extent of project:</p>	<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>Machrobrachium niloticum</i> and <i>Macrobrachium vollenhovenii</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:	Fishers throughout the Nile/Sobat and Bahr-el-Ghazal river systems Aquaculturalists throughout the country Post-harvest processors of the products of fisheries and aquaculture.

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 data-bbox="459 1608 587 1659">Negative: a Positive: c</td> <td data-bbox="587 1565 1437 1700"> 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>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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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	Total			
1 Management and operation of project																														
1 Deployment of government staff																														
2 Procurement of administrative services (contracted)																														
3 Procurement of professional services (contracted)																														
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 Small Research Projects (40 researches. 100,000SSP each)																														
2 Medium Research Projects (14 researches. 300,000SSP each)																														
3 Large Research Projects (6 researches. 1,000,000SSP each)																														
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

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" style="width: 100%;"> <tr> <td style="width: 30%;">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"> • 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. This over 15 years.
(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):	Existing National Aquaculture Training and Research Centre staff will undertake the training. Existing staff in the states will be trained.
(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:	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>
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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 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.
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Part 3: Project cost estimation

Project duration	SSP/USD = 4												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	Total	% 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)																											
4 Implementation of staff training																											
1 Training of county extension officers (per diem)																											
2 Training of county extension officers (transportation)																											
3 Short course training (per diem)																											
4 Short course training (per 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)																											
Total (USD '000)																											
% to total																											

Public sector project
Routine work by government

Private sector project
Routine work by private sector

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
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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" 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
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"> • 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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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	
1 Management and operation of project																											
1 Deployment of government staff																											
2 Procurement of administrative services (contracted)																											
3 Procurement of professional services (contracted)																											
4 Implementation of staff training																											
1 Senior extension workers training course (per diem)																											
2 Senior extension workers training course (transportation)																											
3 Updating/refreshers training course (per diem)																											
4 Updating/refreshers training course (transportation)																											
5 DGs and directors training course (per diem)																											
6 DGs and directors training course (transportation)																											
7 Special course (per diem)																											
8 Special course (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)																											
Total (USD '000)																											
% to total																											

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

6. Institutional Development Subsector

6.1 Investment Planning Space

6.1.1 Investment Planning Space by Development Theme

Subsector	Development Theme	Project ID	Project name	Phase												Year	SSP ('000)	USD ('000)	Respon- sibility																		
				Phase I				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	T2 Food and nutrition security	05.01	Food security and emergency preparedness project	[Stacked bar chart showing investment planning space for 05.01 across phases I-IV]												10	11,128	2,782	N																		
				T3 Economic growth and livelihood improvement	05.02	Agricultural business development support project	[Stacked bar chart showing investment planning space for 05.02 across phases I-IV]												10	8,818	2,204	NS															
							T5 Institutional development	05.03	CAMP implementation coordination project	[Stacked bar chart showing investment planning space for 05.03 across phases I-IV]												3	10,058	2,514	N												
										05.04	CAMP implementing ministries capacity development project	[Stacked bar chart showing investment planning space for 05.04 across phases I-IV]												10	210,984	52,746	NS										
												05.05	Legal and regulatory framework enhancement project	[Stacked bar chart showing investment planning space for 05.05 across phases I-IV]												10	11,380	2,845	NS								
														05.06	Feeder roads and rural markets construction and rehabilitation project	[Stacked bar chart showing investment planning space for 05.06 across phases I-IV]												10	700,680	175,170	NS/S/SC						
																05.07	National agricultural information system development project	[Stacked bar chart showing investment planning space for 05.07 across phases I-IV]												5	13,061	3,265	N				
																		05.08	National agricultural research, extension and training system project	[Stacked bar chart showing investment planning space for 05.08 across phases I-IV]												10	73,121	18,280	N		
																				05.09	Gender capacity development project	[Stacked bar chart showing investment planning space for 05.09 across phases I-IV]												5	6,792	1,698	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

6.1.2 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	2036/37	2037/38	2038/39
05 Institutional Development Subsector																									1,046,020	261,505		
P2 Pillar 2: Market access																									720,878	180,219		
05.02 Agricultural business development support project																									10	8,818	2,204	NS
05.05 Legal and regulatory framework enhancement project																									10	11,380	2,845	NS
05.06 Feeder roads and rural markets construction and rehabilitation project																									10	700,680	175,170	NS/S/SC
P3 Pillar 3: Food supply and hunger																									238,961	59,740		
05.01 Food security and emergency preparedness project																									10	11,128	2,782	N
05.03 C-AMP implementation coordination project																									3	10,058	2,514	N
05.04 C-AMP implementing ministries capacity development project																									10	210,984	52,746	NS
05.09 Gender capacity development project																									5	6,792	1,698	N
P4 Pillar 4: Agricultural research																									86,182	21,545		
05.07 National agricultural information system development project																									5	13,061	3,265	N
05.08 National agricultural research, extension and training system project																									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 CAMP implementation coordination 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

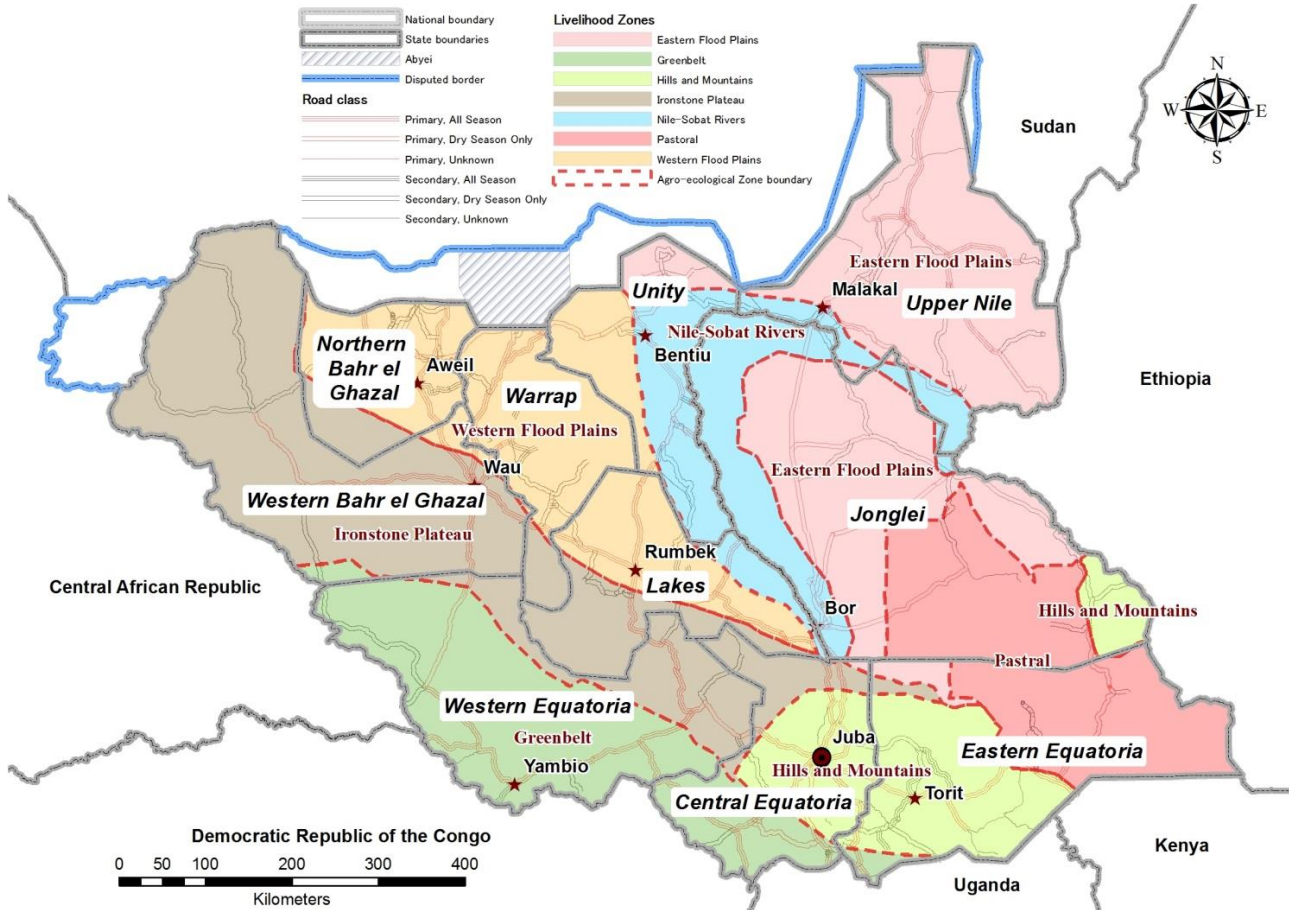
6.3.1 Summary of project cost and scaling-up cost

Subsector	Development Theme	Project ID	Project name	SSP/USD = 4.00											
				Phase I	Phase II	Phase III	Phase IV			SSP (million)	USD (million)				
				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								
00	CAMP Investment Plan total			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						
	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	8,485.3	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						
05	ID Subsector			13.2 18.8 103.6 108.5 114.4	111.6 115.1 101.2 98.6 97.1	77.5 77.1 6.8 0.7 0.5	0.7 0.7	1,046.0	261.5						
	Scaling-up cost			3.3 5.7	6.9 8.7 11.4 11.4 11.8	18.7 15.8 119.0 135.1 131.8	163.8 179.1 181.5 179.3 189.7 176.7 186.4 209.0 195.3 222.5	2,363.1	590.8						
	Subsector total			13.2 18.8 103.6 111.8 120.1	118.5 123.8 112.6 110.0 108.9	96.2 92.9 125.8 135.8 132.2	164.5 179.8 181.5 179.3 189.7 176.7 186.4 209.0 195.3 222.5	3,409.1	852.3						
T2	Food and nutrition security			1.5 1.4 1.4 1.4 1.4	0.8 0.8 0.8 0.8 0.8			11.1	2.8						
	Scaling-up cost			1.5 1.4 1.4 1.4 1.4	0.8 0.8 0.8 0.8 0.8			20.4	5.1						
	Theme total			1.5 1.4 1.4 1.4 1.4	0.8 0.8 0.8 0.8 0.8			31.5	7.9						
	Project cost			1.6 1.3 1.1 1.1 1.1	1.6 1.3 1.1 1.1 1.1	1.1 0.7 0.5 0.7 0.5	0.7 0.7	11.1	2.8						
	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	20.4	5.1						
	Project total			1.6 1.3 1.1 1.1 1.1	1.6 1.3 1.1 1.1 1.1	1.1 0.7 0.5 0.7 0.5	0.7 0.7	31.5	7.9						
T3	Economic growth and livelihood improvement			1.5 1.4 1.1	1.5 1.4 1.1			8.8	2.2						
	Scaling-up cost			1.5 1.4 1.1	1.5 1.4 1.1			10.8	2.7						
	Theme total			1.5 1.4 1.1	1.5 1.4 1.1			19.7	4.9						
	Project cost			1.1 0.7 0.5 0.7 0.5	1.1 0.7 0.5 0.7 0.5	1.1 0.7 0.5 0.7 0.5	0.7 0.7	8.8	2.2						
	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	10.8	2.7						
	Project total			1.1 0.7 0.5 0.7 0.5	1.1 0.7 0.5 0.7 0.5	1.1 0.7 0.5 0.7 0.5	0.7 0.7	19.7	4.9						
05.01	Food security and emergency preparedness project			1.5 1.4 1.1	1.5 1.4 1.1			8.8	2.2						
	Scaling-up cost			1.5 1.4 1.1	1.5 1.4 1.1			10.8	2.7						
	Project total			1.5 1.4 1.1	1.5 1.4 1.1			19.7	4.9						
T5	Institutional development			11.7 17.4 102.2 107.0 112.9	110.8 114.3 99.0 96.4 95.3	76.4 76.4 6.3		1,026.1	256.5						
	Scaling-up cost			3.3 5.7	6.9 8.7 11.4 11.4 11.8	17.1 14.5 117.9 134.0 130.6	162.6 178.0 179.3 176.9 187.2 173.9 183.7 206.0 192.3 218.8	2,331.9	583.0						
	Theme total			11.7 17.4 102.2 110.3 118.6	117.7 123.0 110.4 107.9 107.1	93.5 90.9 124.2 134.0 130.6	162.6 178.0 179.3 176.9 187.2 173.9 183.7 206.0 192.3 218.8	3,358.0	839.5						
	Project cost			3.3 3.3 3.5	5.2 6.6 6.6 6.6 6.9			10.1	2.5						
	Scaling-up cost			3.3 3.3 3.5	5.2 6.6 6.6 6.6 6.9			40.2	10.0						
	Project total			3.3 3.3 3.5	5.2 6.6 6.6 6.6 6.9			50.2	12.6						
05.03	CAMP implementation coordination project			5.4 10.3 20.7 30.7 30.7	29.5 29.3 18.3 18.0 18.1			211.0	52.7						
	Scaling-up cost			1.8 1.9 1.9 1.0 1.0	1.2 0.6 0.6 0.6 0.8			409.4	102.4						
	Project total			5.4 10.3 20.7 30.7 30.7	29.5 29.3 18.3 18.0 18.1			620.4	155.1						
05.04	CAMP implementing ministries capacity development project			1.8 1.9 1.9 1.0 1.0	1.2 0.6 0.6 0.6 0.8			11.4	2.8						
	Scaling-up cost			1.8 1.9 1.9 1.0 1.0	1.2 0.6 0.6 0.6 0.8			18.5	4.6						
	Project total			1.8 1.9 1.9 1.0 1.0	1.2 0.6 0.6 0.6 0.8			29.9	7.5						
05.05	Legal and regulatory framework enhancement project			70.1 70.1 70.1	70.1 70.1 70.1 70.1 70.1			700.7	175.2						
	Scaling-up cost			70.1 70.1 70.1	70.1 70.1 70.1 70.1 70.1			1,587.0	396.8						
	Project total			70.1 70.1 70.1	70.1 70.1 70.1 70.1 70.1			2,287.7	571.9						
05.06	Feeder roads and rural markets construction and rehabilitation project			4.4 3.6 1.9	1.4 1.9			13.1	3.3						
	Scaling-up cost			4.4 3.6 1.9	1.4 1.9 2.8 2.8 2.8			52.6	13.1						
	Project total			4.4 3.6 1.9	1.4 1.9 2.8 2.8 2.8			65.7	16.4						
05.07	National agricultural information system development project			0.1 8.7	8.7 12.5 10.0 7.8 6.3			73.1	18.3						
	Scaling-up cost			0.1 8.7	8.7 12.5 10.0 7.8 6.3			192.5	48.1						
	Project total			0.1 8.7	8.7 12.5 10.0 7.8 6.3			265.6	66.4						
05.08	National agricultural research, extension and training system project			1.2 1.8 1.7 1.5 0.6	1.7 2.1 2.1 2.1 2.1			6.8	1.7						
	Scaling-up cost			1.2 1.8 1.7 1.5 0.6	1.7 2.1 2.1 2.1 2.1			31.7	7.9						
	Project total			1.2 1.8 1.7 1.5 1.3	1.7 2.1 2.1 2.1 2.1			38.5	9.6						

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 CAMP implementation coordination project
- 05.04 CAMP implementing ministries capacity development project
- 05.05 Legal and regulatory framework enhancement project
- 05.06 Feeder roads and rural markets construction and rehabilitation 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)</p> <p>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)</p> <p>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												Total SSP '000 USD '000	% 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	1,490	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	762	11,128	2,782	100%
1 Deployment of government staff	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	684	10,260	2,565	92%
2 Procurement of administrative 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	252	3,780	945	34%
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	252	3,780	945	34%
4 Implementation of staff training	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	180	2,700	675	24%
5 Implementation of research, studies and surveys	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	78	868	217	8%
6 Delivery of extension and training services to the private sector	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	19	5	0%
7 Operation and maintenance	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	32	65	16	1%
2 Construction of infrastructure and procurement of equipment	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	36	72	18	1%
3 Subsidies, equity and loans	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	19	5	0%
4 Construction of office buildings	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	16	32	8	0%
5 Construction of feeder roads	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	36	9	0%
6 Procurement of equipment	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	77	19	1%
7 Provision of cash and/or in-kind subsidies	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	32	259	65	2%
8 Provision of training services to the private sector	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	36	288	72	3%
9 Equity investments	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	19	5	0%
4 Provision of loans	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	32	259	65	2%
5 Social assistance/donation (Emergency)	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	36	288	72	3%
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	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	191	2,782	700	25%
% 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%	7%	100%	25%	

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
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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:	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.
(3) Overall description including temporal and spatial extent of project:	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.
(4) Component structure:	<p>Component 1: Support to develop financial services</p> <p>Component 2: Develop business development services (BDS)</p> <p>Component 3: Establish necessary legal and regulatory framework</p> <p>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</p> <p>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>
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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 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) 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	<p>International consultants:</p> <ul style="list-style-type: none"> • 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 data-bbox="453 338 608 369">M</td> <td data-bbox="608 338 715 369">L: Low</td> <td data-bbox="715 338 821 369">M: Medium</td> <td data-bbox="821 338 1444 369">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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Part 3: Project cost estimation

Project duration	SSPI/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
1 Management and operation of project																										
1 Deployment of government staff																										
1 Printing brochures									20																	
2 Procurement of administrative services (contracted)																										
1 International consultant (project manager)																										
2 International consultant (private sector investment)																										
3 Local consultant (information collection, etc)																										
3 Procurement of professional services (contracted)																										
1 International consultant (private sector investment)																										
2 International consultant (private sector investment)																										
3 Local consultant (information collection, etc)																										
4 Implementation of staff training																										
1 Coordination regular meetings																										
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 ICT equipment for information desk (laptop)																										
2 ICT equipment for information desk (printer)																										
3 Subsidies, equity and loans																										
1 Provision of cash and/or in-kind subsidies																										
2 Provision of training services to the private sector																										
1 National level forum for agricultural investment (per diem)																										
2 National level forum for agricultural investment (transportation)																										
3 State level forum for agricultural investment (per diem)																										
4 State level forum for agricultural investment (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

6.5.3 Support to CAMP 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 implementation coordination task team project		
(3) Project ID:	0503 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 Agricultural Development 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 Implementation Coordination Task Team (CAMP ICTT) at national level to:</p> <ul style="list-style-type: none"> • promote, coordinate and facilitate the ongoing implementation of CAMP-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 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 Implementation Coordination Structure (CAMP 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 ICS will address this.</p> <p>At the TC meeting, the three implementing ministries also decided to establish a special task team, the CAMP Implementation Coordination Task Team (CAMP ICTT) at national level until the first half of 2015. However, it is anticipated that the life of CAMP ICTT will correspond to the 25 year life of the Comprehensive Agricultural Master Plan. Ideally this project will encompass the first three years of the Plan. CAMP 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 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 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 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 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 ICTT at national level; Component 2: Successful CAMP implementation at national level; Component 3: Support for meeting arrangement to facilitate intra-ministerial, inter-ministerial and external coordination at national level and 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 ICTT at national level</p> <p>Activity 1.1: Conduct assessment of the current situation of CAMP ICTT members. Identify gaps in CAMP ICTT and propose actions for improvement. <i>Output:</i> Assessment report that identifies gaps in CAMP 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 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 ICTT more effective and able to implement the core mechanisms for CAMP implementation (CAMP ICS and PFMS)</p> <p>Component 2: Successful CAMP implementation at national level The CAMP 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 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 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 ICTT <i>Output:</i> CAMP ICTT staff can plan and execute with proper information sharing through periodic and ad-hoc meetings</p> <p>Activity 3.2: Support to hold periodic and ad-hoc meetings with implementing Directorates and authorities</p>
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<p><i>Output:</i> CAMP 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.</p> <p><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.</p> <p><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.</p> <p><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.</p> <p><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.</p> <p><i>Output:</i> CAMP objectives, framework and investment priorities adjusted appropriately. Outcomes and impacts known.</p>
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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 ICTT staff.
(2) Description of beneficiaries within the framework of the project:	Immediate beneficiaries are the government officers in CAMP 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 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 ICS for decision making and to drive the transformation of the agricultural sector in South Sudan. CAMP ICTT promotes, coordinates, monitors and facilitates the implementation of a large number of investment projects. By supporting CAMP 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 situation at a starting point:	CAMP ICTT at national level is not established as of late 2014. However, it is estimated that the capacity of potential members of CAMP ICTT to perform their responsibilities will be low. Indicators would include: 1. the level of team capacity;
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(2) Measurable indicators and situation at the end point:	<p>2. the level of staff knowledge and skills for management;</p> <p>By the end of the project the capacity of CAMP 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:</p> <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:	<p>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.</p>
(4) Responsible parties for the monitoring and evaluation:	<p>The planning directorates and development partners will carry out the periodic project reviews.</p>

2.7 Required human resources

(1) Principle of human resources management:	<p>As per CAMP framework and CAMP implementation mechanism</p>
(2) Required human resources in the public sector (Positions, grades and numbers):	<p>CAMP ICTT staff at national level will consist of several government officers:</p> <ul style="list-style-type: none"> • a CAMP ICTT leader • a deputy CAMP ICTT leader • three administrative staff members • a secretary <p>The three CAMP implementing ministries will be responsible to deploy such CAMP ICTT staff.</p> <p>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.</p>
(3) Required human resources in the private sector including consultants (positions, qualification and numbers):	<p>Four consultants will be required to carry out technical assistance and/or training for the CAMP ICTT staff:</p> <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	<table border="1" style="width: 100%;"> <tr> <td style="text-align: center;">L</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>	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>Establishment of the CAMP ICTT at national level was approved at the TC meeting in November 2014. The CAMP 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.</p> <p>Level of capacity at all levels of government</p> <p>Perceived incompetence and corruption at all levels of government will not allow CAMP ICTT to operate in an effective and efficient manner.</p>					

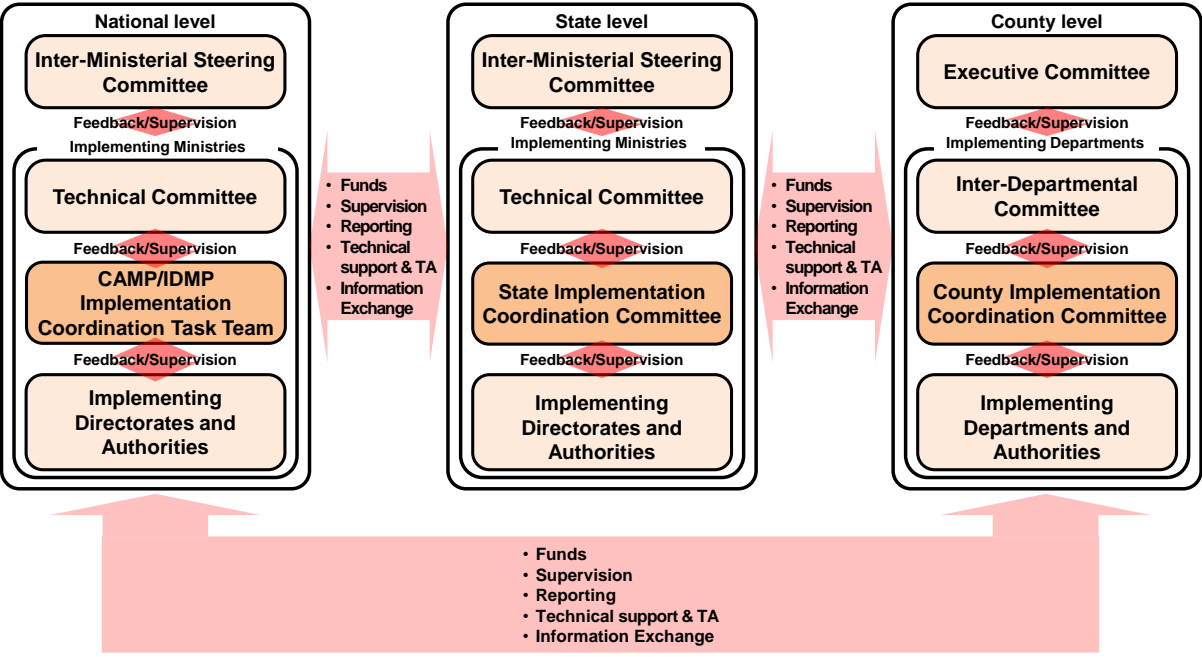
2.9 Other special considerations and/or notes

(1) Other special considerations and/or notes:	<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 gender disaggregated data, as well as gender specific results.</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>It will require little additional resources for the government to continue with CAMP 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 ICTT should be incorporated into the implementing ministries.</p>
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Attachment 1: A schematic description of CAMP Implementation Coordination Structure (CAMP ICS)



Part 3: Project cost estimation

Project duration	SSPI/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	SSP '000 USD '000	total			
05.03 CAMP implementation coordination project	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	3,304	3,304	3,450																								10,058	2,514	100%			
1 Deployment of government staff																													8,208	2,052	82%	
2 Procurement of administrative services (contracted)	2,736	2,736	2,736																										3,024	756	30%	
3 Procurement of professional services (contracted)	1,008	1,008	1,008																										3,024	756	30%	
1 International consultant (institutional development)	1,008	1,008	1,008																										1,080	270	11%	
2 International consultant (donor coordination)	360	360	360																										1,080	270	11%	
3 International consultant (knowledge management)	360	360	360																										1,080	270	11%	
4 International consultant (monitoring and evaluation)	360	360	360																										1,080	270	11%	
4 Implementation of staff training	568	568	714																										1,850	462	18%	
1 Meetings with implementing directorates and authorities	12	12	12																										36	9	0%	
2 Technical Committee meetings	18	18	18																										54	14	1%	
3 Inter-ministerial steering committee meetings	9	9	9																										27	7	0%	
4 State stakeholder meetings (per diem)	122	122	122																										365	91	4%	
5 State stakeholder meetings (transportation)	90	90	90																										270	68	3%	
6 Stakeholder annual meetings (per diem)	182	182	182																										547	137	5%	
7 Stakeholder annual meetings (transportation)	135	135	135																										405	101	4%	
8 Review meeting (per diem)	101	101	101																										101	25	1%	
9 Review meeting (transportation)	45	45	45																										45	11	0%	
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)	3,304	3,304	3,450																										10,058	2,514	100%	
Total (USD '000)	826	826	863																													
% to total	33%	33%	34%																										100%			

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

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:	0504	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:	<p>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.</p> <p>The following definition of capacity development will guide this project:</p> <ul style="list-style-type: none"> • 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. <p>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.</p>
(2) Objectives:	<p>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.</p>
(3) Overall description including temporal and spatial extent of project:	<p>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 Agricultural Development 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.</p>
(4) Component structure:	<p>Component 1: Organizational development; Component 2: Human resources development; and Component 3: Infrastructure development</p>

2.2 Detailed description of project component, activity and outputs

(1) Component, activity and outputs:	<p>Project activities would be for each ministry and at all levels, i.e., national, state and local government:</p> <p>Component 1: Organizational development</p> <p>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.</p> <p>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</p>
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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:	Local, regional and international consultants providing technical assistance and training. Local engineering and construction companies. Local suppliers of office furniture and equipment
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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"> <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: d</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: d
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: d				
(2) Description of expected negative and/or positive environmental and social impact, and mitigation measures:	(Negative) <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. (Positive) <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%;"> <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:	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 Subsidies, equity and loans				310	310	310	310	310	310	310																2,172	543	1%
3 Equipment & furniture for 79 county level office																												
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	17,988	18,137																210,984	52,746	100%
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%																100%		

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 data-bbox="459 286 587 315">Negative: a</td> <td data-bbox="587 259 1439 315">Project: a: is likely to have minimal or little impact on the environment and/or society</td> </tr> <tr> <td data-bbox="459 342 587 371">Positive d</td> <td data-bbox="587 315 1439 371">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.

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
05.05 Legal and regulatory framework enhancement project																												
1 Management and operation of project																												
1 Deployment of government staff	1,800	1,940	1,922	1,022	1,022	1,202	572	572	572	572	752													11,380	2,845	100%		
2 Procurement of administrative services (contracted)	1,800	1,800	1,800	900	900	1,080	450	450	450	630													10,260	2,565	90%			
3 Procurement of professional services (contracted)	1,800	1,800	1,800	900	900	900	450	450	450	450													9,900	2,475	87%			
1 International consultant (legal specialist for each subsector)																												
2 International consultant (evaluation)																												
4 Implementation of staff training	140	122	122	122	122	1,202	122	122	122	122													1,120	280	10%			
1 Inter-ministerial coordination meetings (venue)	9	9	9	9	9	9	9	9	9	9													81	20	1%			
2 Coordination meetings with state (per diem)	32	32	32	32	32	32	32	32	32	32													292	73	3%			
3 Coordination meetings with state (transportation)	36	36	36	36	36	36	36	36	36	36													324	81	3%			
4 Coordination meetings with state (venue)	9	9	9	9	9	9	9	9	9	9													81	20	1%			
5 Trainings for capacity building (venue)	18	14	14	14	14	14	14	14	14	14													122	30	1%			
6 Workshops for enforcement mechanism	8	8	8	8	8	8	8	8	8	8													68	17	1%			
7 Seminars for national level (venue)	10	10	10	10	10	10	10	10	10	10													90	23	1%			
8 Seminars for state level (venue)	5	5	5	5	5	5	5	5	5	5													45	11	0%			
9 Seminars for county level (venue)																												
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)	1,800	1,940	1,922	1,022	1,022	1,202	572	572	572	572	752													11,380	2,845	100%		
Total (USD '000)	450	485	481	256	256	301	143	143	143	143	188													11,380	2,845	100%		
% to total	16%	17%	17%	9%	9%	11%	5%	5%	5%	5%	7%													100%				

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

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"> <tr> <td data-bbox="454 1568 590 1697"> Negative: c Positive: d </td> <td data-bbox="590 1568 1444 1697"> 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												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	
05.06 Feeder roads and rural markets construction and rehabilitation project																													
Cost group																													
Phase 1																													
Phase 2																													
Phase 3																													
Phase 4																													
1 Management and operation of project	360	360	360	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 Deployment of government staff																													
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	360	360	360	3,600	900	1%
1 Overall supervision of construction/rehabilitation																													
4 Implementation of staff training	360	360	360	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%
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	69,708	69,708	69,708	69,708	69,708	69,708	69,708	69,708	69,708	69,708	69,708	69,708	69,708	69,708	69,708	69,708	69,708	69,708	69,708	69,708	69,708	69,708	69,708	69,708	69,708	69,708	697,080	174,270	99%
1 Construction of office buildings																													
2 Construction of research, training and other specialized buildings	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	53,694	53,694	536,940	134,235	77%	
3 Construction of feeder roads	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	22,680	22,680	226,800	56,700	32%	
1 1200 km of unpaved road construction	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	4,000	4,000	40,000	10,000	6%	
2 + 20-metre Bailey bridges (50 places)	200	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%	
3 + culverts (50 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	23,814	23,814	238,140	59,535	34%	
4 1800 km of unpaved road rehabilitation	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	2,800	2,800	28,000	7,000	4%	
5 + 20-metre Bailey bridges (35 places)	200	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%	
6 + culverts (50 places)	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	16,014	16,014	160,140	40,035	23%	
4 Construction of production, market and transportation facilities	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	13,248	13,248	132,480	33,120	19%	
1 Construction of market facilities in 69 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	1,242	1,242	12,420	3,120	2%	
2 Water supply facilities attached to new 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	1,344	1,344	13,440	3,360	2%	
3 Rehabilitation of market facilities in 10 countries	180	180	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%	
4 Water supply facilities attached to rehabilitated market																													
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)	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	70,068	70,068	700,680	175,170	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	17,517	17,517	175,170	45,000	25%	
% 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%	10%	10%	10%	100%	25%	

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.¹⁷⁷

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 (MAFCRD, 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 (MAFCRD, 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.</p> <p>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</p> <p>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</p> <p>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.</p> <p>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.</p> <p>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</p> <p>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</p> <p>Outputs: User-friendly data base defined with easily accessible information</p> <p>Activity 2.6: Determine responsible Directorates and/or Departments for NAIS</p> <p>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</p> <p>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</p> <p>Outputs: Procedures in place to conduct survey</p> <p>Activity 3.3: Prepare training contents and materials</p> <p>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</p> <p>Outputs: Staff capable of carrying out large scale survey</p> <p>Activity 3.5: Prepare for large scale agricultural survey</p> <p>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"> <thead> <tr> <th data-bbox="453 1671 587 1704">Negative: a</th> <th data-bbox="587 1671 1444 1704">Project:</th> </tr> </thead> <tbody> <tr> <td data-bbox="453 1704 587 1753">Positive: d</td> <td data-bbox="587 1704 1444 1753">a: is likely to have minimal or little impact on the environment and/or society</td> </tr> <tr> <td></td> <td data-bbox="587 1753 1444 1809">b: may have an impact on the environment and/or society</td> </tr> <tr> <td></td> <td data-bbox="587 1809 1444 1859">c: is likely to have a significant impact on the environment and/or society</td> </tr> <tr> <td></td> <td data-bbox="587 1859 1444 1908">d: will have a significant impact on the environment and/or society</td> </tr> </tbody> </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 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="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:	<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.)

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
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 Output: Plan for how to establish NARETS Activity 1.2: Create legal framework: prepare bill/law/regulations as necessary Activity 1.3: Establish NARETS: identify stakeholders; procure office space; provide office furniture and equipment and recruit personnel. Activity 1.4: Provide capacity development: develop strategic plan; human resources administration systems; financial management systems; planning, monitoring and evaluation; train officers. Output for activities 1.2-1.4: NARETS is ready to perform its duties</p> <p>Component 2: Support Agricultural Research Activity 2.1: Assess existing system for national research grants. Study other national systems Activity 2.2: Establish system for national research grants; obtain budget for grants 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. 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 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 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. Output: Plan for capacity development of training centres and to regulate certificate and diploma programs. 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 Output: Vocational qualifications (certificate/diploma) recognised throughout South Sudan. 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. Output: 50 Master Trainers ready to implement Component 4 (Support Agricultural Extension System)</p> <p>Component 4: Support Agricultural Extension System 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. 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. 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 Output: Better quality extension provided to the agricultural sector. 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. 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:	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: <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>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"> • 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:	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: <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:	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: <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:	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.		
(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.		

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.)

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						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														122	30	0%
2 Annual forum for research (transportation for participants)						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														122	30	0%
4 Annual forum for extension (transportation for participants)						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	6,329	6,329	6,329	6,329	6,329	6,329	6,329	6,329	6,329	73,121	18,280	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	1,582	1,582	1,582	1,582	1,582	1,582	1,582	1,582	1,582	18,280	4,570	100%
% to total						0%	12%	12%	17%	14%	11%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	100%	100%	100%

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:</p> <ul style="list-style-type: none"> 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) <p>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:</p> <ul style="list-style-type: none"> Concept of gender Gender analysis tools (Productive and reproductive roles, access to and control
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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:	Direct beneficiaries would be: <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 • Indirect beneficiaries would be: <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 data-bbox="453 1529 587 1675">Negative: a Positive: c</td> <td data-bbox="587 1529 1444 1675"> 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:	(Negative) <ul style="list-style-type: none"> • No negative environmental or social impact will be anticipated. (Positive) <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="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:	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 					

Part 3: Project cost estimation

Project duration	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	39/40	total	
1 Management and operation of project	1,088	1,848	1,666	1,515	565																						6,682	1,670	98%
1 Deployment of government staff	26	26	26	26	51																						130	33	2%
1 Gender trainings (per diem)	14	14	14	14																							43	11	1%
2 Gender trainings (transportation)	12	12	12	12																							36	9	1%
3 Evaluation at states (per diem)					24																						24	6	0%
4 Evaluation at states (transportation)					27																						27	7	0%
2 Procurement of administrative services (contracted)	1,080	1,325	1,145	994	511																						5,054	1,264	74%
3 Procurement of professional services (contracted)	1,080	720	540	540	360																						3,240	810	48%
1 International consultant (project manager/gender development)																											1,814	454	27%
2 International consultant (gender development/training)	8	497	495	495																							1,494	374	22%
4 Implementation of staff training	8																										8	2	0%
1 Consultation meetings																											2	0	0%
2 Gender TOT at three ministries																											1,215	304	18%
3 Gender trainings for governments staffs (per diem)																											270	68	4%
4 Gender trainings for governments staffs (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 evaluation survey																													
2 Construction of infrastructure and procurement of equipment	110																												
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	110																												
1 Office furniture for the gender unit in the two ministries	50																												
2 ICT equipment for the gender unit in the two ministries	40																												
3 Gender education/information material in the library	20																												
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)	1,198	1,848	1,666	1,515	565																						6,792	1,698	100%
Total (USD '000)	299	462	417	379	141																								
% to total	18%	27%	25%	22%	8%																								

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