



GEF-6 PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: Full-sized Project

TYPE OF TRUST FUND: Least Developed Countries Fund

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PART I: PROJECT INFORMATION

Project Title:	Strengthening the capacity of government and communities in South Sudan to adapt to climate change		
Country(ies):	South Sudan	GEF Project ID: ¹	9723
GEF Agency(ies):	UNEP	GEF Agency Project ID:	01518
Other Executing Partner(s):	UNEP PCDMB – SS and Ministry of Environment	Submission Date:	9 January 2017 6 March 2017
GEF Focal Area(s):	Climate change	Project Duration (Months)	60 months
Integrated Approach Pilot	IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/>	Corporate Program: SGP	<input type="checkbox"/>
Name of parent program:	[if applicable]	Agency Fee (\$)	858,080

A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES²

Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Programs)	Trust Fund	(in \$)	
		GEF Project Financing	Co-financing
CCA-1, Outcome 1.2 <i>Livelihoods and sources of income of vulnerable populations diversified and strengthened</i>	LDCF	6,200,000	20,000,000
CCA-2, Outcome 2.2 <i>Access to improved climate information and early-warning systems at regional, national, sub-national and local levels</i>	LDCF	1,622,420	6,000,000
CCA-3, Outcome 3.1 <i>Institutional arrangements to lead, coordinate and support the integration of climate change adaptation into relevant policies, plans and associated processes established and strengthened</i>	LDCF	1,210,000	4,000,000
Total Project Cost		9,032,420	30,000,000

B. INDICATIVE PROJECT DESCRIPTION SUMMARY

Project Objective: To increase the capacity of government and vulnerable communities to adapt to climate change in South Sudan.						
Project Components	Financing Type ³	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Co-financing
Component 1: Capacity development for climate change adaptation in South Sudan.	TA/Inv	Outcome 1: Institutional capacity for adaptation to climate change developed.	Output 1.1: National land use maps developed showing climate change and environmental vulnerability, demographics, land uses and projections.	LDCF	1610,000	6,500,000
			Output 1.2: Policy research action programme developed and implemented together with ministries responsible for land and water resource management and Disaster Risk Management.			
			Output 1.3: Hydro-meteorological monitoring stations are established/ refurbished in selected drought- and flood-prone states to support the CCA policy research programme.			

¹ Project ID number will be assigned by GEFSEC and to be entered by Agency in subsequent document submissions.

² When completing Table A, refer to the excerpts on [GEF 6 Results Frameworks for GETF, LDCF and SCCF](#).

³ Financing type can be either investment or technical assistance.

			<i>Output 1.4: National decision-support system for integrating climate change adaptation and sustainable environmental management into land-use and development planning.</i>			
Component 2: Vulnerability to Climate Change reduced in pilot sites.	TA/ Inv	Outcome 2: EbA adaptation strategies transferred to communities as part of an agreed land-use plan structured to reduce people's vulnerability to climate change.	Output 2.1: Protocols for climate-resilient restoration of degraded ecosystems developed.		6,000,000	19,000,000
			Output 2.2: Ecosystem based approaches to adaptation (EbA) using multi-use and climate-resilient species to improve ecosystem services and provide goods to local communities demonstrated.			
			Output 2.3: Diversified livelihoods, established at project intervention sites.			
			Output 2.4: User-friendly seasonal and shorter range forecasts tested with farmers using locally accessible tools/mechanisms.			
			Output 2.5: Climate-smart agricultural techniques, such as agroforestry and conservation agriculture, are implemented at project intervention sites.			
Component 3: Knowledge created and transferred	TA	Outcome 3: Strengthened knowledge base and transfer of knowledge on climate change effects and adaptation benefits.	Output 3.1: Environmental and socio-economic benefits tracked and converted into policy-relevant knowledge pieces.	LDCF	1,000,000	3,000,000
			Output 3.2: Knowledge and lessons learned on climate change adaptation – within and beyond South Sudan disseminated to policy makers and communities at project intervention sites.			
			Output 3.3: National climate change awareness-raising campaign conducted for policy makers and the communities based on results from the project for uptake into policies.			
			Output 3.4: Long-term climate change adaptation and hydro-meteorological short and MSC-level modules developed and established in a relevant national research institution to support national policy needs.			

			Output 3.5: Ten Masters' level and PhD students (nationals) are given study support in the areas of Meteorological sciences, GIS, environmental science and adaptation planning to support the climate change adaptation policy research programme.			
Subtotal					8,610,000	28,500,000
Project Management Cost (PMC) ⁴				LDCF	422,420	1,500,000
Total Project Cost					9,032,420	30,000,000

For multi-trust fund projects, provide the total amount of PMC in Table B, and indicate the split of PMC among the different trust funds here: ()

C. INDICATIVE SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE, IF AVAILABLE

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
Recipient government	Comprehensive Agriculture Master Plan (CAMP) – Government of South Sudan	Grant	30,000,000
Total Co-financing			30,000,000

D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES) AND THE PROGRAMMING OF FUNDS ^{a)}

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee (b) ^{b)}	Total (c)=a+b
UNEP	LDCF	South Sudan	Climate change	(select as applicable)	9,032,420	858,080	9,890,500
Total GEF Resources					9,032,420	858,080	9,890,500

a) Refer to the [Fee Policy for GEF Partner Agencies](#).

E. PROJECT PREPARATION GRANT (PPG)⁵

Is Project Preparation Grant requested? Yes No If no, skip item E.

PPG AMOUNT REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES) AND THE PROGRAMMING OF FUNDS

Project Preparation Grant amount requested: \$150,000					PPG Agency Fee: 14,250		
GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in \$)		
					PPG (a)	Agency Fee ⁶ (b)	Total c = a + b
UNEP	LDCF	South Sudan	Climate change	(select as applicable)	150,000	14,250	164,250
Total PPG Amount					150,000	14,250	164,250

PART II: PROJECT JUSTIFICATION

1. Project Description.

⁴ For GEF Project Financing up to \$2 million, PMC could be up to 10 percent of the subtotal; above \$2 million, PMC could be up to 5 percent of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

⁵ PPG requested amount is determined by the size of the GEF Project Financing (PF) as follows: Up to \$50k for PF up to \$2m (for MSP); up to \$100k for PF up to \$3m; \$150k for PF up to \$6m; \$200k for PF up to \$10m; and \$300k for PF above \$10m. On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

⁶ PPG fee percentage follows the percentage of the Agency fee over the GEF Project Financing amount requested.

1.1 The global environmental and/or adaptation problems, root causes and barriers that need to be addressed

South Sudan is the world's youngest nation. It has an unsettled past with the region experiencing a period of near-consistent war for the last ~60 years. In 2011, South Sudan gained independence from Sudan in a move that many anticipated would restore peace to the volatile region. However, peace was short-lived and internal conflicts broke out again in 2013. In early 2016, the Government of South Sudan (GoSS) and other South Sudanese political parties agreed to form the Transitional Government of National Unity. Although not without challenges, the Transitional Government is striving to bring peace and stability to the country. This is of critical importance as years of conflict and marginalisation have left South Sudan as one of the most underdeveloped countries in the world. The prolonged conflict has undermined traditional social structures and community coping mechanisms and has had negative social impacts on affected communities.

South Sudan has one of the worst human development indicators in the world, with at least 80 percent of the population under the poverty line and 65 percent in extreme poverty. 27 percent of the population aged 15 years and above is literate, with significant gender disparities: the literacy rate for males is 40 percent compared to 16 percent for females. 55 percent of the population has access to improved sources of drinking water. Over two thirds of the population is under 30⁷. As the country is underdeveloped, communities in South Sudan are particularly reliant on natural resources for their livelihoods. These natural resources include rivers/wetlands and woodlands that provide water, fish and a range of timber and non-timber forest products. Water resources include four main river basins, namely: Bahr el Jebel, Bahr el Ghazal, White Nile and River Sobat. The White Nile traverses the country from south to north and floods to form the Sudd Wetland, a vast swamp that measures 30,000–40,000 km² in extent. The potential sustainable fishery production from these sources is estimated at 100,000–300,000 tonnes per annum. Woodlands⁸ cover approximately 32.4 percent⁹ of the country and provide an assortment of valuable goods and services to local communities and the country as a whole. For example, the formal forest sector directly employs approximately 23,000 people and contributes ~\$400 million towards the country's gross domestic product (GDP)¹⁰. Furthermore, an estimated 96 percent and 40 percent of rural households use fuelwood (i.e. firewood and/or charcoal) for cooking¹¹ and household lighting respectively¹². In addition to fuelwood, forests provide a variety of other ecosystem goods and services, including: i) non-timber forest products (NTFPs) such as medicinal plants and food sources; ii) cultural and social services such as recreation and tourism; iii) regulating services such as soil protection, air/water purification and carbon sequestration; and iv) supporting services such as nutrient cycling and soil accretion.

Despite their importance to communities, the development process is degrading and destroying the natural resource base. Recent maps on land cover changes indicate a dramatic shift from woodland and forest to cultivated land and bare soil for agricultural production and fuel wood and charcoal. This degradation is a result of rapid population growth¹³, a large rural population¹⁴, limited access to electricity¹⁵, continued internal conflict, high food insecurity¹⁶ and insufficient management. Indeed, an estimated 277,630 ha of forest¹⁷ – approximately 5 percent of total forest area – are cleared each year through, *inter alia*: i) land clearing for cultivation, roads and settlements; ii) charcoal production; and iii) fuelwood harvesting. Reducing ecosystem degradation is a priority for the GoSS because it

⁷ World Bank, 2016. <http://www.worldbank.org/en/country/southsudan/overview>

⁸ including woodlands

⁹ FAO 2011. Land cover atlas of the Republic of South Sudan. Rome.

¹⁰ <http://www.globalforestwatch.org/country/SSD>. Accessed on 11 April, 2016.

¹¹ including water sterilisation

¹² NBS 2011. *National baseline household survey 2009. Report for South Sudan*.

¹³ Since gaining independence, South Sudan's population has grown at an average annual rate of ~4.3 percent¹³. A substantial proportion of this growth can be attributed to the return of millions of displaced people from camps in Ethiopia, Kenya and Uganda.

¹⁴ Approximately 81 percent of the country's ~12 million people live in rural areas. <http://data.worldbank.org/country/south-sudan>. Accessed 11 April, 2016.

¹⁵ 0.2 percent of people living in rural areas have access to electricity. IEA, World Energy Outlook 2015.

¹⁶ FAO 2016. *Special report: FAO/WFP crop and food security assessment mission to South Sudan*. Rome.

¹⁷ UNEP 2012. *Environmental impacts risks and opportunities assessment: natural resources management and climate change in South Sudan*. Juba.

recognizes the importance of natural resources in livelihoods strategies¹⁸. The degradation of natural resources diminishes the capacity of these ecosystems to provide some of the goods and services that local communities depend on for their day-to-day livelihoods for example non-timber forest products and water. Moreover, forests are compromised in their ability to buffer local communities against the negative effects of climate variability and change. Overgrazing and bush fires are leading to increased soil erosion and silting of rivers, lakes, dams and irrigation canals which reduces the supply of drinking water, affects the water table, contributes to declining agricultural productivity as well as affecting soil quality and fertility. Within the last two decades, a number of previously perennial rivers along the border with Central African Republic have become seasonal, negatively affecting swamp areas as well as water quality with knock-on impacts on fisheries.

Communities in South Sudan are already vulnerable to climate change. Approximately 86 percent of rural households in South Sudan rely on rain-fed agriculture and animal husbandry as their main source of livelihood¹⁹. Like all rain-fed systems, climate (rainfall) variability is a fundamental factor that determines uncertainty in agricultural output, making people relying on rain-fed agriculture for their livelihoods exceedingly vulnerable to erratic rainfall, floods and droughts. Although limited data availability precludes the modelling of specific climate change scenarios in South Sudan, a regional analysis showed that summer rains declined by 15–20 percent, and temperatures rose by $>1^{\circ}\text{C}$, from the mid-1970s to the late 2000s in parts of the country²⁰. In the future, rainfall is expected to become increasingly erratic, increasing the incidence of both floods and droughts. Indeed, 62 percent of rural households already claimed to have been severely affected by droughts and/or floods from 2005–2009. Temperatures are also likely to continue rising, which will intensify the effects of droughts. Research on the Sobat River and the Bahr el Ghazal river catchments suggests that an increase of 2°C in temperature might cause the natural flow to fall to 50 percent of the current average. Future increases in the frequency and severity of extreme climate events will likely lead to: i) food insecurity through failed crop yields, loss of livestock and reduced NTFP production; ii) heightened water scarcity for drinking and irrigation; iii) worsening water quality; iv) more soil erosion; v) higher incidences of diseases such as cholera, typhoid and dysentery; vi) higher frequency of fires as a result of droughts; vii) lower availability of fuelwood; and viii) internal conflict as a result of human competition for scarce resources.

An additional factor that is expected to exacerbate the negative impacts of climate change on local communities and ecosystems in South Sudan is the limited ability of local communities and government to anticipate, and effectively respond to, climate change-induced disasters (i.e. droughts and floods). Because of damage to infrastructure during the civil war, only three out of a previous 43 hydro-meteorological monitoring stations are currently operating across the country²¹. The weak hydro-meteorological monitoring network impedes the: i) collection and analysis of climate information for the forecasting of disaster events; ii) timely broadcasting of disaster warnings; iii) effective response of government and local communities to the warnings iv) analysis of climate change projections and how these interact with socio-economic projections for the country; and v) integration of climate change predictions into development planning. Such impediments increase the vulnerability of local communities to climate change-induced disasters and can potentially lead to loss of human life and property. Better information on climate change risk analysis and vulnerability to climate change-induced disasters in South Sudan can and should inform adaptation planning.

There are a number of constraints that limit the integration of climate change adaptation into institutional frameworks and national policies. Firstly, institutional weaknesses hamper the mainstreaming of climate change across sectors. Currently the Directorate for Climate Change within the Ministry of Environment is responsible for drafting a national climate change policy, but it has limited influence on policies and plans emanating from other sectors. Secondly, there are limited climate information and risk assessments available to inform climate change-resilient development planning. Thirdly, there are few experienced and well-trained personnel to undertake and support

¹⁸ Tiitmamer, N., 2015. *Assessment of policy and institutional responses to climate change and environmental disaster risks in South Sudan*. The Sudd Institute.

¹⁹ NBS 2011. *National baseline household survey 2009. Report for South Sudan*.

²⁰ Funk, C. et al., 2011. *A climate trend analysis of Sudan*. US Geological Society.

²¹ Tiitmamer, N., 2015. *Assessment of policy and institutional responses to climate change and environmental disaster risks in South Sudan*. The Sudd Institute.

climate change adaptation. Finally, there is limited knowledge and awareness of climate change among the public, and therefore climate change issue are not highly prioritised.

The **problem** that the proposed LDCF-financed project (hereafter referred to as the LDCF project) seeks to address is that local communities in South Sudan are vulnerable to climate change, and both they and the government have limited technical and institutional capacity to adapt to the predicted effects of climate change. The vulnerability of local communities to climate change is exacerbated by: i) the degradation to, and a reduction in ecosystem goods and services from, natural resources; and ii) the lack of climate information for effective adaptation planning.

The proposed solution is to strengthen the capacity of local communities and government in South Sudan to be able to plan for and implement a suite of adaptation interventions – such as Ecosystem-based Adaptation (EbA), additional livelihoods and climate-smart agriculture –that improve ecosystem services and reduce the vulnerability of communities to climate change. In addition, the project will strengthen capacity of the government to plan for climate change adaptation and to mainstream this into the policy framework in South Sudan across relevant ministries in coordination with the National Adaptation Planning (NAP) process which is due to start later this year. This will be achieved through three main strategies, by: i) strengthening the capacity for adaptation planning and policy development, including increased awareness of climate change adaptation to government; developing mapping and information products and planning tools and climate risk analysis; ii) investing in ecosystems based Adaptation (EbA) iii) developing the evidence base on cost effectiveness of these interventions for policy development, working closely with communities.

The project will work in those areas where the root cause of conflict among communities is access to natural resources, for example, forests, water points and grazing land. Climate change is an added stressor to hardship and displacement. Local peacebuilding will be promoted using natural resources as the basis for rebuilding key relationships and a common vision.

The project strategy incorporates outputs to address the **barriers** to climate change adaptation, which the NAPA indicates as follows: i) internal conflict and security concerns ii) lack of a clear and transparent institutional framework for adaptation, leading to overlapping mandates and responsibilities iii) limited coordination between newly formed ministries and line departments iv) limited institutional, technical and financial capacity of government to plan for and implement climate change adaptation interventions; v) poor infrastructure, making it difficult to access rural areas vi) limited awareness of climate change among government and local communities vii) low level of literacy and high level of poverty.

1.2 The baseline scenario or any associated baseline projects

Currently, rapid population growth, the expansion of settlements and agriculture, high reliance on fuelwood and low food security are causing the degradation of natural ecosystems in South Sudan. The degradation of these ecosystems increases the vulnerability of local communities to the negative effects of climate change. Additionally, limited capacity of the government to collect and analyse hydro-meteorological data to predict and plan for climate change-induced disasters such as droughts and floods makes local communities especially vulnerable to these disasters. To address these problems, the GoSS has begun to develop institutional frameworks focused on climate change, environmental degradation and natural disasters. However, these frameworks are currently in nascent stages and are hampered by a lack of technical and financial capacity.

The GOSS has developed two main plans to address the pressing development issues of food and water security, namely the Comprehensive Agriculture Master Plan and the Irrigation Development Master Plan. However, while these plans indicate that climate change will be a complicating factor in the development process, these plans were developed without a detailed understanding of how climate change risks will affect the achievement of goals and policy pathways because of the lack of climate information in South Sudan. Local communities targeted by these initiatives remain thus vulnerable to the negative effects of climate change.

The baseline co-financing project will be the **Crop and forestry subsectors** of the **Comprehensive Agriculture**

Master Plan (CAMP) (2015–2040; \$297,033,000), which are implemented by the Ministry of Agriculture and Food Security and focuses on the sustainable management of South Sudan’s forests and woodlands. These are selected because of the focus of the project on adaptation based on well-functioning ecosystems services (not just in provisioning aspects), which depend on appropriate levels of above ground land cover, as well as natural-resource-based livelihoods. With particular relevance to the LDCF project, the **forestry subsector** of CAMP has made financial provisions for projects involved in the: i) development of community forestry, agroforestry and smallholder plantations; ii) market development and promotion of commercial forest products; iii) sustainable production and improved efficiency of fuelwood and charcoal; iv) development of national forest resources inventory, information and management plans; v) establishment and maintenance of forest policies and legal frameworks; vi) development of forestry institutional and human resources capacity; and vii) establishment of the South Sudan Forest Research Institute. The **crop sub-sector** sector plan has 35 project profiles in a whole raft of areas ranging from resettlement and conflict resolution, crop production, agricultural diversification, seed production and others.

As described above, a lack of climate information in South Sudan means that the forestry subsector projects of the CAMP are being planned without adequate understanding of how climate change will affect ecosystem function. The predicted effects of climate change – including rising temperatures and increasingly erratic rainfall – are likely to reduce rainfall, increase evapotranspiration and associated water availability, as well as affecting plant productivity and tree growth and will therefore have a negative effect on agricultural and forest productivity. It is therefore important that these climate change risks be incorporated into the forestry subsector of CAMP to promote the success of these projects. The crop sub-sector plan does not consider the ecosystem services dimension and the potential trade-offs involved between provisioning services, such as crop production, and regulating and supporting ecosystems services. The landscape approach to planning EbA in the project, in tandem with agricultural and diversified livelihoods, will be done in a manner that invests in ecosystem function and promotes sustainable natural resources use, benefitting longer-term use, and which buffers climate extremes. The South Sudan NAPA identifies key adaptation needs as being water harvesting, water resources management, regulation and management of water bodies and preservation of wetlands and watersheds, all of which can be brought about or enhanced with EbA methods.

Over the LDCF project proposed implementation period (2018 – 2022), the projects in the forestry sub-sector of the CAMP are budgeted at ~\$60,000,000 and for the crop sub-sector at \$192,000,000. As elements of these projects may be implemented at different timeframes and in different geographic locations, conservatively, \$30,000,000 from the CAMP is considered as co-financing for this LDCF project.

For a more comprehensive description of the LDCF project activities, and how these will build on the baseline project, see Section A.1.4. The co-financing amount provided by the baseline project is based on consultations with relevant stakeholders. The PPG phase will validate this amount.

1.3 The proposed alternative scenario, GEF focal area²² strategies, with a brief description of expected outcomes and components of the project

The proposed alternative scenario will increase the capacity of institutions and local communities in South Sudan to implement an integrated package of climate change adaptation interventions designed to invest and provide stewardship of ecosystem function across a landscape in order to increase the resilience of communities that are vulnerable to climate change. This intervention will be planned at a landscape level paying due regard to upstream-downstream socio-ecological interactions and impacts on water and soil resources and ecosystems services. The proposed project will address five NAPA priority projects, namely priority projects:

- 1 – Promotion of reforestation and agroforestry to reduce vulnerability to droughts and floods;
- 2 – Sustainable management and conservation of wetlands in South Sudan;

²² For biodiversity projects, in addition to explaining the project’s consistency with the biodiversity focal area strategy, objectives and programs, please also describe which [Aichi Target\(s\)](#) the project will directly contribute to achieving.

- 3 – Promotion of climate-smart agricultural techniques to improve livelihoods and food security under changing climatic patterns;
- 4 – Establish improved drought and flood Early Warning Systems in South Sudan through improved hydro-meteorological monitoring network; and
- 5 – Strengthening the institutional capacity of the Government of South Sudan for adaptation planning and to integrate climate change into national policy and planning processes.

The LDCF project consists of three major components, described below. Section A1.4 presents a detailed description of the adaptation scenario funded by LDCF resources.

Component 1: Institutional capacity for climate change adaptation developed in South Sudan

This component will strengthen the institutional capacity of government to implement climate change adaptation interventions in South Sudan through improved information and promoting government leadership and engagement on climate change adaptation. This strengthened capacity will facilitate the integration of climate change adaptation into existing and future policies, regulations and strategies, working closely with the NAP process which is due to start later this year. This component will establish/refurbish hydro-meteorological monitoring stations in drought- and flood-prone states in South Sudan in areas prioritized by policy makers under the proposed policy research programme. In this way, the policy demand will frame the supply of climate monitoring information, for use by policy-makers. This component will establish the necessary infrastructure and knowledge required for collecting, analyzing and sharing climate information to inform development planning and early warning systems (EWS) and for testing among farmers.

For Outcome 1 we expect that 50% of the budget would be dedicated to investment for upgrading of the meteorological network. This is an estimate and detailed budgets for the TA and investment proportions for this project component will be developed during the PPG phase.

Indicative outputs within this component are as follows.

Outcome 1: Institutional capacity for adapting to climate change developed.

Output 1.1: National land use map showing climate change and environmental vulnerability, land uses and projections.

Output 1.2: Policy research action programme developed and implemented together with ministries responsible for land and water resource management and disaster risk reduction;

Output 1.3: Hydro-meteorological monitoring stations are established/refurbished in selected drought- and flood-prone states to support the CCA policy research programme.

Output 1.4: National decision-support system for integrating climate change adaptation and sustainable environmental management into land-use and development planning;

Component 2: Climate resilient livelihoods and ecosystems in South Sudan

This component will demonstrate concrete on-the-ground climate change adaptation interventions at project intervention sites. These interventions are designed to invest in ecosystem function, which is expected to buffer the effects of climate change, and to increase the capacity of local communities to adapt to climate change, and reduce the degradation of ecosystems.

The project will work in those areas where the root cause of conflict among communities is access to natural resources, for example forests, water points and grazing land. Project activities will be developed through participatory methods for land use and planning, EbA and livelihoods development including the work to develop seasonal and short range forecasts that can be applied to agricultural decision-making. The project will seek to engage the beneficiaries at every stage of the project, and establish and/or strengthen community-management committees as well as strengthening of the existing community networks in the project areas. These activities are therefore expected to build social capital and promote collaboration among communities, government institutions and civil society. groups of people. Conflict resolution methods that have been used in community planning and development in South Sudan and in other countries will be identified during the PPG phase, including the UN

Environment experience in Darfur, Sudan on the use of collaborative ways of managing natural resources based on mechanisms of dialogue and dispute resolution.

For Outcome 2, Investments are expected for delivery of Outputs 2.2, 2.3 and 2.5. We would expect some 50% of the financing to be investment, bearing in mind that adaptation is a result of building of capacity, which requires technical assistance, demonstration, participatory training and dialogue processes and time. This is an estimate and detailed budgets for the TA and investment proportions for this project component will be developed during the PPG phase. In designing the implementation strategy, the project will not compromise the sustainability of activities through imprudent ways of delivering the support. For example, implementation strategies that build on community co-financing either in kind or through own cash resources will be developed. This will help communities to internalize the training and support received which should promote sustainability of the project activities and promote autonomous adaptation once the project ends. Indicative outputs within this component are as follows:

Outcome 2: EbA adaptation strategies transferred to communities as part of an agreed land-use plan structured to reduce people's vulnerability to climate change.

Output 2.1: Protocols for climate-resilient restoration of degraded ecosystems developed.

Output 2.2: Ecosystem based approaches to adaptation using multi-use and climate-resilient species to improve ecosystem services and provide goods to local communities demonstrated;

Output 2.3: Additional livelihoods, such as bee-keeping and gum collection, established at project intervention sites;

Output 2.4: User-friendly seasonal and shorter range forecasts tested with farmers using locally accessible tools/mechanisms;

Output 2.5: Climate-smart agricultural techniques, such as agroforestry and conservation agriculture, are demonstrated at project intervention sites;

Component 3: Knowledge created and transferred

This Component will monitor the benefits from the project regarding ecosystem services and livelihood benefits as well as other benefits such as peace-building. The benefits framework will be scoped out during the PPG phase. The data and information gathered will be codified and disseminated to policy makers and communities in order to influence policies and action on the ground. The project will also invest in the country's emerging scientists and researchers in adaptation-relevant academic themes by providing financial support and designing the study programmes in ways that will benefit the implementation of the project and be of benefit to policymakers longer term.

Outcome 3: Strengthened knowledge base and transfer of knowledge on climate change effects and adaptation benefits.

Output 3.1: Environmental and socio-economic benefits tracked and converted into policy-relevant knowledge pieces.

Output 3.2: Knowledge and lessons learned on climate change adaptation – within and beyond South Sudan – collated and disseminated to communities at project intervention sites and relevant government institutions;

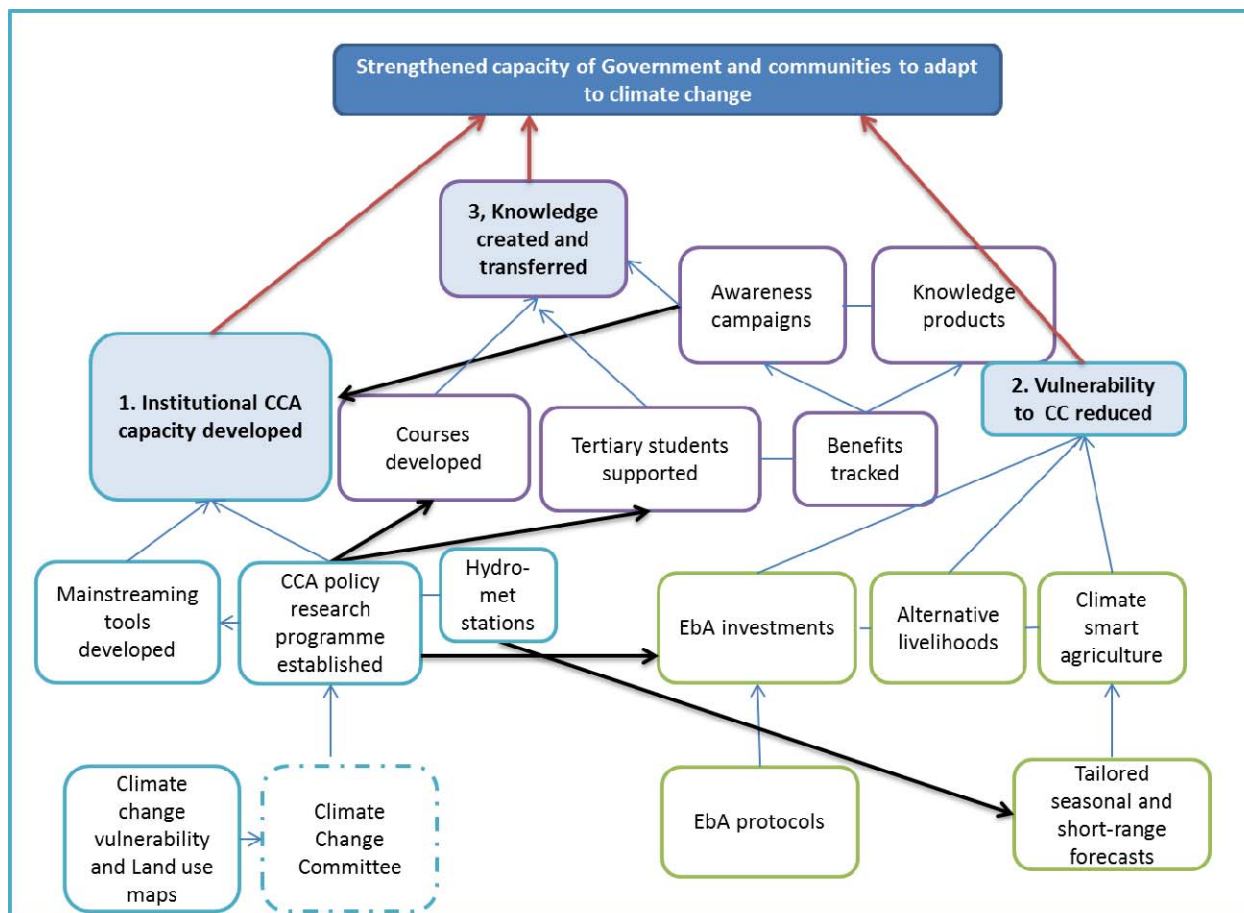
Output 3.3: National climate change awareness-raising campaign conducted for policy makers and the citizenry based on results from the project.

Output 3.4: Long-term climate change adaptation and hydro-meteorological short and MSC-level modules developed and established in a relevant national research institution;

Output 3.5: 10 Masters' level and PhD students supported in the areas of Meteorological sciences, GIS, environmental science and adaptation planning.

The indicative Theory of Change, which will be validated during the PPG phase, is indicated in Figure 1. This shows the interactions between the three Components (bold black lines) and how the Outcomes contribute to delivering the Objective.

Figure 1: Indicative Theory of Change for the project



The NAPA sets out 10 guiding principles for all adaptation projects. This project conforms to these principles as follows:

*The final design of adaptation projects should integrate **adaptation needs from multiple sectors and pursue complementary activities**:* through an integrated landscape approach, the project will bring together adaptation priorities in the Environment, Water Resources Management, Agriculture, Disaster Risk Reduction and Policy and Institutional Framework sections of the NAPA in activities such as water harvesting, climate-smart agriculture, investments in ecological infrastructure, disaster risk reduction and investments in the capacity development of government officers and the research community.

*Adaptation projects should **promote conflict resolution and peace-building**:* The project will be designed so as to demonstrate how EbA planning approaches promote peace-building. The details around the location of the project and the rationale for this will be scoped out during the PPG phase, but in principle the project should be located in areas where environmental degradation is a current problem with visible effects on people’s welfare and which are expected to interact with climate change in deleterious ways. One strategy, to be explored with GoSS during the PPG phase, would be to work in areas with analogous socio-economic characteristics but in different states of peace and conflict (for example, Districts which have displaced people and other Districts which are more stable), so as to form the basis for a natural experiment on the extent to which investments in EbA can promote peace and security. The environmental causes of migration and displacement and how this interacts with climate change is included in Component 1 as part of the ‘policy research programme’ output.

Gender equality should be considered in the design of adaptation projects: A gender gap analysis will be carried out

in the PPG phase which will include questions on preferences for land use planning, in the design of implementation strategies for ecosystem rehabilitation and for priority alternative livelihoods to be supported by the project. The empowerment of women, as well as men, will be promoted in the structuring of the consultation and implementation processes. Women provide the bulk of agricultural labor in South Sudan and in many cases are head of their household, so the project activities on building skills in climate-smart agricultural practices will provide disproportionate welfare gain to women.

Adaptation projects should target those groups most vulnerable to climate change impacts: the PPG will determine the location of the project activities, but in principle, the project will target rain-fed subsistence agriculture, female-headed households and areas that are experiencing the effects of environmental degradation.

Adaptation projects should promote livelihood diversification: this is one of the outputs in Component 2. The aim will be to promote livelihoods that use the natural resource base sustainably and, where possible, provide support to diversify out of natural-resource based livelihoods.

Capacity building of human, institutional, technical and financial resources should be included in the design of adaptation projects: Components 1,2 and 3 all focus on capacity development in various ways. Component 1 is targeted on developing human and institutional capacity within government systems; Component 2 focused on capacity development within vulnerable communities and Component 3 is focused on capacity development within the research community as well as raising awareness and understanding among policy makers and the public.

Adaptation projects should promote long-term research on climate change adaptation, including the collection of baseline information. To address this need, the project has a dedicated approach to establishing the policy information needs through a consultative process with policy makers and to ensure that an appropriate monitoring framework is established around the project activities in order to gather the required information for adaptation planning by different Ministries.

Indigenous knowledge should be included in the design of adaptation projects: this can included in the policy research programme established under Component 1. Certainly, the landscape planning and implementation strategies established in Component 2 will be based on promoting what currently works (e.g in use of ecological investments for ecosystem services) with demonstration of innovative adaptation methods.

Land tenure must be considered when deciding the location for adaptation projects: these questions will be considered during the PPG phase and could also be included in the policy research programme.

The project is aligned with South Sudan INDC which has clearly identified ‘‘Adaptation of vulnerable communities to climate change’’ as one of the key area and has proposed actions for: promotion of agro-forestry practices, introduction of climate smart agriculture techniques and practices, afforestation of the degraded land, enhance capacity building and participation of stakeholders including women and youth, increase awareness of local communities on climate change, and establish and rehabilitate the hydro-metrological monitoring networks.

1.4 Additional cost reasoning and expected contributions from the baseline, the LDCF and co-financing

The LDCF project will increase the capacity of government and local communities in South Sudan to adapt to the negative effects of climate change and to try adapted ways of land-use planning and natural resource use that aim to decrease vulnerability to climate change, as described in Section A.1.1. There are three main components. A description of the additional cost reasoning follows below.

Component 1: Institutional capacity for climate change adaptation developed in South Sudan

Business as usual scenario:

While the GoSS has focused primarily on restoring peace to the country, they have also acknowledged – by becoming party to the United Nations Framework Convention on Climate Change (UNFCCC) in 2014 and¹¹

producing a National Adaptation Programmes of Action (NAPA) in 2016 – the imminent negative impacts that climate change will have on local communities and natural ecosystems in the country. With this acknowledgement in mind, the GoSS has taken decisive steps to integrate climate change adaptation into institutional frameworks and national policy. However, institutional framework development is currently in a nascent stage and most policies²³ under development are in draft form²⁴.

Since the signing of the Comprehensive Peace Agreement in 2005, policies and legislation which were developed during the pre-independence period are gradually being replaced and renewed. The continued refinement of these policies will support South Sudan to achieve the Sustainable Development Goals (SDGs) including the NAPA priorities. The following important frameworks offer opportunities to assure integrated resource and environmental management, disaster risk preparedness and climate change adaptation.

The South Sudan Development Plan (SSDP) 2011– 2016 is the main guiding document for the development of the country, and addresses conflict management, poverty reduction and economic development. The SSDP contributes towards achieving the vision for the country as set out in the South Sudan Vision 2040. The objectives of the SSDP include: i) ensuring sustainable development through enforcing social and environmental impact assessments for all development programmes and projects; ii) acceding to and ratifying applicable and beneficial multilateral environmental treaties, conventions and agreements; iii) ensuring economic development is environmentally sustainable; and iv) developing a national early warning system and enhancing environmental awareness to reduce risks of disasters.

The South Sudan National Environmental Policy recognizes that without adaptation and mitigation measures, climate change will likely have adverse effects on the environment and livelihoods of South Sudanese. In addition, the policy highlights the potential for climate change to “exacerbate food insecurity, biodiversity loss, water shortages and conflicts due to scarcity of water resources.” In response to the challenges posed by climate change, the policy proposes the development of a climate change policy and mechanisms for adaptation and mitigation.

The 2015 Comprehensive Agriculture Master Plan (CAMP) details the Government of South Sudan’s plan for expanding the agricultural sector. The CAMP was developed to: i) address hunger and food insecurity; ii) improve rural livelihoods and generate income; and iii) diversify the economy through an innovative and competitive agricultural sector. Within the CAMP, over 110 indicative sub-sector project profiles have been developed to guide decision-makers in the crop, forestry, livestock and fisheries sub-sectors. The actions required to increase agricultural production across all sub-sectors are detailed in these project profiles. In addition, the project profiles address various barriers to development in the relevant sub-sector, including climate variability and change.

As most of the international support provided to South Sudan is focused on humanitarian issues, few initiatives aim to address the capacity constraints mentioned above. Building Resilience and Adaptation to Climate Extremes and Disasters (BRACED) is currently promoting the strengthening of government and local community capacity to adapt to climate change in South Sudan, but as a regional project it has limited resources to dedicate to South Sudan (for further details on BRACED see Appendix 1). Given the very early stages of integrating climate change adaptation into institutional frameworks, as well as the large number of relevant government institutions involved²⁵, additional technical and financial resources will be needed to strengthen government capacity to adapt to climate change. Unless this happens, there will continue to be missed opportunities for development plans such as the CAMP and IDMP to build resilience to climate change and communities will continue to remain vulnerable to climate change.

²³ Since the signing of the Comprehensive Peace Agreement in 2005, policies and legislation that were developed during the pre-independence period are gradually being replaced and renewed. Currently, the majority of these policies are in the final consultation and approval phase and have draft status.

²⁴ Tiitmamer, N., 2015. *Assessment of policy and institutional responses to climate change and environmental disaster risks in South Sudan*. The Sudd Institute.

²⁶ The final site selection, including a decision on the total number of sites, will take place during the PPG phase and will be based on a list of criteria that will be validated with relevant stakeholders. These criteria could include *inter alia*: i) security; ii) level of degradation; iii) presence of other ongoing initiatives; iv) importance for biodiversity conservation; v) accessibility; and vi) willingness of local communities to participate.

South Sudan has a near non-existent hydro-meteorological monitoring network, with only three monitoring stations currently functioning. This considerably reduces the capacity of government to collect and analyse hydro-meteorological data for use in predicting the effects of climate change, developing climate risk assessments and producing early warnings for flood and drought events. This makes local communities in certain states exceedingly vulnerable to climate change-induced disasters like droughts and floods. Without prior warning or an understanding of how to plan for these events, communities suffer losses to livelihood, property and human life. While there are a few initiatives in place to assist South Sudan in this area for example, FAO is supporting the relevant government institutions to enhance the collection, analysis and reporting of agrometeorological information in South Sudan. FEWS net - the Famine Early Warning Systems Network provides early warning and analysis on acute food insecurity. Additionally, the IGAD Climate Prediction and Applications Centre (ICPAC) provides regional climate and early warning information, as well as capacity building and training. However, the size and needs of South Sudan are much greater than what is currently being provided, and both FEWS net and ICPAC operate regionally and hence the climate information provided is at a broader scale than what is needed for local communities especially farmers..

The hydromet-information network system establishment programme (HINSEP) of the IDMP plans to establish a functional centralized hydromet information network system for effective and efficient irrigation development and management. The focus of HINSEP is to support other IDMP programmes, and in particular, to provide the information necessary for updating irrigation development plans. HINSEP recommends that 13 hydrometric monitoring stations, and 26 meteorological monitoring stations, are built across South Sudan in the short-term (for further details on HINSEP see Appendix 1). The information collected by these stations could then also be using to inform development in other sectors. However, the source of funding for establishment of these monitoring stations is currently unclear as the GoSS continues to prioritize humanitarian actions and food security. Furthermore, additional monitoring stations will be required to collect the information needed to inform detailed climate change predictions and risk assessments. Without additional investment, the hydro-meteorological monitoring network in South Sudan will remain inadequate to collect the information necessary to predict climate change effects and inform climate change-resilient development planning. Communities in drought- and flood-prone areas will therefore remain vulnerable to climate change.

Adaptation scenario:

Additional funding (GEF/LDCF: \$1,610,000) is required to strengthen the institutional capacity of national government for adapting to climate change. The project will benefit from the establishment of an inter-ministerial climate change committee under the NAP process to promote the inclusion of climate change adaptation in development planning, including medium- and long-term planning, as well as in both national and sectoral policies and strategies. The project will provide additional institutional incentives for policy makers to convene around an adaptation planning process by directly engaging the main ministries responsible for land and water resource management planning in a policy research programme, thereby developing ownership of the policy process.

To facilitate the integration of climate change risks national and sectoral policies and plans, the LDCF project will produce a national land use map showing climate change vulnerability maps incorporating indicators of environmental degradation, demographics and land uses, with projections. The project will work with the Ministries responsible for agriculture, water resource management and national development planning to enable them to develop a climate change risk assessment and adaptation options analysis, particularly focusing on the impact and implications of climate risks on ecosystems function, ecosystem services and vulnerability levels, and to consider what this means for sector policies, strategies and spending plans. The project will support the development of a decision-support system to help ministries integrate climate change adaptation and sustainable environmental management into routine land-use and development planning processes. This 'decision-support system' would either take shape as planning software capable of capturing and interpreting the land use/climate vulnerability data, or as guidelines or decision-trees. This will be scoped out and further defined during the project development stage. The project will coordinate closely with the NAP process and will be complementary by gathering information on landscape level adaptation planning and experience. The PPG phase will scope out the details of the policy

research programme based on Ministry interest, internal process and sectoral areas where there are knowledge gaps. This could include developing integrated analysis of the case for EbA considering climate change risk pathways, in developing the evidence base on the benefits of EbA, trade-offs with other development approaches, and co-management approaches with built infrastructure, and trends and projections of migration flows and impacts due to environmental and climate change stress.

Additional funding is also required to strengthen the capacity of the Meteorological services to collect and analyse hydro-meteorological data which can be used for developing climate change risk assessments under Component 1. The South Sudan NAPA indicates that because of limited availability of climate data, no specific climate change scenario models have been found for South Sudan. The overall aim of these activities are to build climate change risk assessment and early warning capacity and capability, as well as to increase the application of Meteorological Services in making the case for investments in ecosystems and livelihood strategies that support those investments. The project will support training of government meteorological staff on operating hydro-meteorological monitoring stations, and in collecting and analysing hydro-meteorological data in order to strengthen capacities to predict climate change effects and generate early warnings.

To strengthen the capacity of government to collect hydro-meteorological information, existing monitoring stations will be refurbished and additional monitoring stations installed. The PPG phase will determine the extent of the work needed to either refurbish or install new monitoring equipment.

Component 2: Climate resilient livelihoods and ecosystems in South Sudan

Business as usual scenario:

As described in Section A1.1. natural ecosystems provide valuable goods and services to local communities in South Sudan. These goods and services have the potential to reduce the vulnerability of local communities to the negative effects of climate change. However, natural ecosystems in South Sudan are currently experiencing high levels of degradation because of expanding human activities, overdependence on forest resources, and climate change. Consequently, these systems have weakened capacity to buffer local communities against the impacts of climate change.

South Sudan has millions of hectares of prime rangelands, surface water, good soils and rainfall but food sufficiency has not been reached since 2009. The majority of farmers are at the subsistence level and have insufficient knowledge, skills and experience in agriculture. They use simple hand tools, minimal irrigation and other inputs and paying for rural labour is beyond the means of most farmers. Subsistence farmers mainly use family and communal labour for ploughing, sowing, weeding and harvesting but this limits the ability to expand cultivation. The use of traditional storage facilities means post-harvest losses are high. Insecurity caused by civil unrest has led to displacement for some.

The forestry subsector of CAMP projects described in Section A.1.2. aims to ensure the sustainable management of South Sudan's forests. In particular, they aim to: i) increase institutional capacity for sustainable forest management; ii) establish forest policies and legal frameworks; and iii) enhance the goods and services provided by forests to local communities. As such, the forestry subsector CAMP objectives align well with those of the LDCF project. However, a lack of climate information in South Sudan means that the forestry subsector projects of the CAMP have been planned without adequate climate change risk assessments or integration of climate change adaptation techniques. Because of this, these projects will not target those communities that are highly vulnerable to negative climate change effects nor will associated climate change adaptation techniques (such as the introduction of drought-resilient species) be promoted through their activities. Under the business-as-usual scenario, climate change adaptation – including EbA – will not be integrated into initiatives for forest restoration and social and economic development in South Sudan. Consequently, local communities and forest ecosystems will likely remain vulnerable to the negative impacts of climate change.

The crop sub-sector plan in the CAMP comprises actions to provide direct support to farmers, and especially internally displaced people and resettled people for staple crops and horticulture and in terms of providing water points for livestock, seed production, support to setting up farmer organisations, strengthening of extension services and agro-input providers, pest and disease control and in establishing small and medium scale irrigation development projects. Absent is consideration of potential ecosystem impacts and sources of support for agricultural outcomes, for example in promoting sustainable land management with positive effects on soil integrity and levels of sedimentation affecting downstream irrigation infrastructure, impacts which will be magnified by climate extremes, or in promoting climate-smart methods of agriculture that take due account of expected wetter or drier years and adjust planting strategies in response to this.

Adaptation scenario:

Additional funding (GEF/LDCF: \$6,000,000) is required to implement an integrated package of adaptation technologies based on investments in ecosystem function and diversified livelihoods that manage the natural resource base sustainably in forest ecosystems in drought- and flood-prone states²⁶. Consequently, it is expected that the vulnerability of local communities living in these areas will be reduced. The project will help local authorities and communities to develop an agreed land-use plan that provides for investments and improvements in ecosystem functioning, including river flow and soil integrity. As well as productive uses such as woodfuels and agricultural production in a manner that invests in people's ability to buffer climate extremes and protects lives and livelihoods from the effects of climate change.

Utilising the national land use and climate change vulnerability maps produced under Outcome 1, project intervention sites will be identified. A landscape approach will be used to further identify possible project sites during the PPG phase. In addition, protocols for climate-resilient restoration of degraded ecosystems – particularly forests – will be developed with relevant stakeholders including government, academics, practitioners and technicians of baseline projects. Indigenous, multi-use and climate resilient species to be used for restoration will be identified during the development of the protocols. These protocols will also build on lessons learned from other restoration projects and will facilitate the replication of these climate-resilient interventions in similar ecosystems. Local communities and technical government staff at project intervention sites will then be trained, according to the protocols, to implement and sustain the LDCF project's interventions, including EbA, additional livelihoods and climate-smart agriculture.

Based on the protocols developed, degraded ecosystems at project intervention sites will be restored to improve ecosystem services and provide goods to local communities. Climate-resilient and multi-use species that supply a diverse range of goods for commercial as well as domestic use – including timber and NTFPs such as resin, medicine, fibre, nuts and fruit – will be used in the tailored restoration of degraded forest. This will provide local communities with additional livelihood options while at the same time increasing the potential of these ecosystems to provide valuable services such as water provision and soil stabilization.

In addition to the EbA interventions, the LDCF project will increase the capacity of local communities living around the project intervention sites to adopt diversified livelihoods and climate-smart agriculture techniques, for example in managing wetter or drier than normal years using targeted planting strategies such as the type of seed used, the type of land preparation implemented, the mix and rotation of crops and the timing of the planting. The PPG phase will scope out the potential for the development and testing of user-friendly seasonal forecasts and shorter range forecast tool with farmers using locally accessible methods such as text messages. The PPG phase will determine the details of a training programme for vulnerable communities: capacity needs, potential trainers and numbers interested to receive the training. By introducing additional livelihood strategies and climate-smart agricultural techniques to local communities, the project is expected to lessen pressure on natural ecosystems and achieve a better balance between provisioning and other ecosystem services and so reduce the climate change vulnerability of these communities. This

²⁶ The final site selection, including a decision on the total number of sites, will take place during the PPG phase and will be based on a list of criteria that will be validated with relevant stakeholders. These criteria could include *inter alia*: i) security; ii) level of degradation; iii) presence of other ongoing initiatives; iv) importance for biodiversity conservation; v) accessibility; and vi) willingness of local communities to participate.

integrated approach to reducing climate change vulnerability is in line with the guiding principles for adaptation projects described in the NAPA. As forest degradation for wood fuel and charcoal production reflects the need for biomass energy, the PPG phase will scope out whether the project could and should support an output to disseminate energy efficient cook stoves.

The PPG phase will look at the potential to use climate risk information for drought and flood risk management at the farmer level in the South Sudan context in order to protect livelihoods from drought and flood damage (based on existing experiences and national strategies to develop current experience), and the tools and mechanisms that the project could support at the information and institutional levels to generate these returns. Locally appropriate methods to develop the seasonal and shorter range forecasts would incorporate participatory design processes (for co-production of knowledge); use of traditional forecasting systems for drought and rain, as well as accessible technologies to transmit the information to the end-user such as mobile phones and radio.

The PPG phase will determine effective implementation arrangements for working at the community level, scoping out the capacity needs and actions needed in order to help communities engage in the project and to strengthen decentralised government structures in the implementation process.

Component 3: Knowledge created and transferred

Business as usual scenario:

There is limited information on climate change in South Sudan which limits the evidential basis of policies and policy development. This is because of the limited capacity and infrastructure to collect data, the loss of information due to conflict and insufficient mechanisms to store relevant information. The evidence base is therefore weak and there is insufficient information against which to measure the performance of adaptation interventions. The South Sudan NAPA indicates that one of the factors contributing to current vulnerability is the lack of technical capacity to understand and predict climate change, which constrains adaptation in the country. The prolonged period of civil war in South Sudan has meant insufficient investment in education, particularly at the tertiary level and has led to skilled professionals leaving the country.

Higher education enrollments totaled 23,968 in 2009, most of whom were students at the Khartoum-based campuses of three of South Sudan's three universities: Juba, Bahr el Ghazal and Upper Nile. Just 6500 students were enrolled at South Sudan campuses. South Sudan has five functioning and four non-functioning publicly-funded universities and a number of private tertiary institutions. Weak capacity has also meant that recruitment of promotion of staff to position for which they are unqualified. The Universities have yet to develop strategic plans and readily available data on students, staff and academic programmes is lacking.

Science education and education for sustainable development have been identified as priorities for strengthening natural resource management and environmental protection while promoting economic development in South Sudan. While environmental principles have been included in primary and secondary school curricula, at tertiary level there is a pressing need to increase access and encourage enrollment in the science and technology fields²⁷.

The CAMP indicates that a lack of reliable data has undermined planning, coordination, delivery of services and investment in the agricultural sector. There are no established systems that collect data to enable monitoring of sector performance, There is incomplete data on the inventory of resources such as stocks of natural resources. The livestock, forestry and fisheries sub-sectors emphasize public interventions to establish and improve information management and the research and training capability of public sector interventions. The crop subsector emphasizes capacity building interventions, placing emphasis on practical on-the-ground knowledge creation and training.

Adaptation scenario:

²⁷ UNESCO Country Programming Document for South Sudan 2014-2016

Part of the aim of this component is to demonstrate to communities and policy makers alike how an integrated land use plan that invests in ecosystem function as well as in livelihoods activities can help both to contribute to economic development and to help communities buffer the effects of climate change. These benefits will be tracked and the results will feed into the awareness campaign and the knowledge products that will be developed in Component 1 and which will serve to further inform policy development. The PPG phase will determine an effective methodology for this process for example in linking to the National University and the student support output Under Outcome 2.

The PPG phase will also consider how best to synthesize knowledge and lessons from adaptation projects and initiatives that have been undertaken/financed in neighboring countries such as Kenya, Uganda and Ethiopia, as a way of strengthening the design and implementation of the project strategy in Outcome 2.

In addition to strengthening institutional capacity, the LDCF project will also increase knowledge and awareness of both government and local communities on climate change adaptation. To do this, firstly the project will support a national awareness-raising campaign for policy makers and the citizenry in South Sudan. The campaign will disseminate results information from the project on: i) climate change adaptation interventions; ii) the role that natural ecosystems play concerning climate change adaptation; and iii) climate-resilient livelihood activities. The aim will be to motivate actors to implement adaptation-relevant policies. Secondly, the project will gather knowledge and lessons learned on climate change adaptation – within and beyond South Sudan – for dissemination to communities at the project intervention sites, and policy makers.

To support human capital development of technical specialists for adaptation in South Sudan, the project will provide support in two areas. The first is supporting the development of climate change adaptation and hydro-meteorological short courses and Masters' level modules with a national research institution, such as the University of Juba. In addition, the project will support ten Masters level and PhD students in the areas of Meteorological sciences, Geographical Information Systems, Environmental science and adaptation planning, making appropriate technical links to supporting the implementation of Component 3 of this project. The PPG phase will determine the partnership arrangements for this activity, for example in drawing on regional organizations such as ICPAC to support national level capacity development, and the areas where is most need to develop technical capacities. This should be framed by the priorities for policy research indicated by policy makers coordinated in Component 1.

The following measures will be used to retain people after their research:

- (i) Signing of a legal agreement between the government and students receiving scholarships that upon completion of their degrees, they will return to South Sudan and will serve a minimum of 3 years in a government department or university.
- (ii) As an incentive, it will be agreed with the government to provide a guaranteed employment to the returning graduates after completing their studies.

1.5 Adaptation benefits (LDCF)

The expected adaptation benefits of this LDCF project at the community level will be to improve the resilience of livelihoods against climate change impacts and thereby reduce vulnerability levels with respect to climate change. This will be achieved through the promotion of methods to sustainably manage the natural resource base and thereby promote improvements in ecosystem services, which will enable better adaptation to climate change impacts. This will include investments in ecological infrastructure, climate-smart agriculture and alternative livelihoods.

It is well established that ecosystems provide provisioning services (agricultural production, woodfuel, timber) together with supporting and regulating ecosystem services such as soil fertility, surface water flow regulation and pollination. The benefits obtained by people contribute to various aspects of human wellbeing, such as adequate livelihoods, sufficient nutritious food, health, secure resource access and security from disasters. If not managed correctly, problems such as pest damage, competition for water, nutrient run-off, decreasing soil fertility, soil loss and sedimentation of waterways can occur and been shown to be in decline. These impacts worsen with extreme

climate conditions such as heavy downpours, high temperatures and drought which are set to happen more frequently due to climate change. It is also well established that intensified pressure for provisioning services such as agriculture and wood fuel is closely linked to ecosystem decline. Getting the balance between provisioning, supporting and regulating ecosystem services will help to mitigate the effects of climate extremes on vulnerable communities. In addition, socio-ecological systems are complex systems comprising feedback loops that often produce unintended consequences if not understood well and translated to well-designed investment programmes.

The policy research programme established under Component 1 and the benefits monitoring framework that is developed for this project under Component 3 together with support to research community in South Sudan is intended to improve the evidence base of the socio-ecological baseline processes and how adaptation interventions can affect these positively as well as any negative effects that might be produced. This information will be useful to adaptation planning processes happening more widely in the country.

The expected adaptation benefits of this LDCF project at the community level will be an increased capacity to anticipate and adapt to climate change and to manage climate risks and vulnerability in pilot areas. The project will also aim to reduce vulnerability of the project communities to climate change. By working with local communities to restore degraded ecosystems and establish alternative livelihoods, the LDCF project will promote sustainable management of natural resources. In particular, the project will: i) restore degraded ecosystems accordingly to climate-resilient restoration protocols; ii) support the implementation of alternative livelihood strategies appropriate for each community; iii) implement climate-smart agricultural techniques with pilot farmers and iv) build knowledge and capacity among policy makers and within the research community of climate change impacts and adaptation that can serve planning systems in the future. Therefore, the project will reduce the vulnerability of local communities living in pilot areas to climate change.

The specific adaptation benefits of the proposed LDCF-financed project will include: i) increasing the resilience of ecosystems, people and communities to buffer against climate change-induced droughts and floods; ii) reducing soil erosion; iii) improving and maintaining water quality²⁸ through restored ecosystems; iv) improving water supply by promoting groundwater recharge and water conservation; v) providing NTFPs and alternative livelihoods; vi) improving food security through intensified and diversified climate-resilient agricultural practices.

The project expects to work with 11420 direct beneficiaries over the 10 Payams (Districts) in the project (80,000 household members indirectly benefiting) in 2-3 States. The PPG will establish the numbers more concretely once the project sites have been identified with GoSS. The project will ensure that gender equity is fully reflected in the project strategy so that the project benefits can be equitably accessed.

The PPG phase will determine the areas where the project will be located and the numbers of direct and indirect beneficiaries expected from the project interventions.

1.6 Innovation, sustainability and potential for scaling up.

The low-cost of EbA interventions promotes their sustainability, as communities are able to maintain and replicate the approach without the need for large amounts of external financing. Research is increasingly indicating that an EbA approach represents an innovative and cost-effective means of adapting to climate change²⁹. This is because EbA reduces vulnerability to climate change while simultaneously providing a range of co-benefits such as carbon storage and sequestration, biodiversity conservation and alternative livelihoods opportunities to reduce poverty. Furthermore, EbA represents a cost-effective approach to adaptation in comparison with the costs of other types of investments³⁰. The LDCF project interventions are therefore innovative, no-regret³¹ and low cost and will reduce the vulnerability of communities living in and around project intervention sites.

²⁸ This will increase the availability of fresh water and result in fewer water-borne diseases.

²⁹ Jones, H.P., Hole, D.G., Zavaleta, E.S. 2012. *Nature Climate Change*, 2: 504-509.

³⁰ A study in Lami Town, Fiji, found that EbA options provide a high benefit-to-cost return in terms of avoided flood damages as well as provision of secondary ecosystem services. See: UNEP/STREP 2012. *A comparative analysis of ecosystem-based adaptation and engineering options for Lami Town, Fiji: Synthesis Report*.

The LDCF project will promote sustainability of Outputs 2.2 and 2.4 through two strategies, the first being to invest in institutions so that capacity to sustain and scale-up the investments is strengthened; the second strategy is to invest in livelihood systems that make the project participants better off, thereby creating an incentive for the project participants to continue the practices. The strong ties between the practical, livelihoods aspects of the project and the policy, institutional and human capacity aspects of the project aims to facilitate the transfer of adaptation experience into the budget and sector plan preparation process. For example, by demonstrating the value of investing in the hydro-met monitoring network for livelihoods improvements and adaptation, it is expected that Government of South Sudan would be prepared to maintain and keep investing in the hydro-met monitoring network and in supporting communities on adaptation.

Institutional investments will include i) developing a national decision-support system for integrating climate change adaptation into development planning that can continue to be utilized once the project has completed; ii) capacity development of government staff through training and mentoring on the gathering and analyzing hydro-meteorological information; iii) developing protocols for climate-resilient ecosystem restoration to make sure that this approach can be replicated; iv) training local communities and sub-national government staff to sustain and replicate EbA interventions, additional livelihood activities and climate-smart agricultural techniques; (v) establishing and/or strengthening of community based committees / organizations and strengthening of existing customary networks with particular focus on women.

Livelihoods improvements are expected to come about through (i) establishing diversified sources of income i) skills development iii) natural –resource based enterprises such as bee-keeping, growing vegetable and fruit trees, medicinal plants and other non-timber forest products; (iv); improving the existing farming and cultivation methods by introducing climate resilient seeds and trees species, water harvesting, floods management and provision of the necessary tools and material for resilience building and adaptation.

Participating communities will be asked to make in-kind contributions in shape of labour, provisions of materials and other assets, such as land to ensure that commitment to the project is secured. The selection of communities and project sites will be based on appropriate social, environmental and economic criteria to ensure successful implementation, replication and sustainability of project activities.

Innovative aspects of the project include : i) climate risk analysis and landscape planning; ii) tertiary educational support for emerging scientists and policy researchers iii) forging links between the research community and policy makers iv) testing EbA for its ability to promote livelihood security and the extent to which the investments help communities to buffer extreme events, and iv) institutional development on adaptation planning.

Component 1 of the project is concerned with policy and institutional development that should benefit the whole country. The replication potential regarding beneficiary numbers and the scaling up potential through the revision of policy frameworks to incorporate climate change adaptation will be assessed during the PPG phase, based on the possible reach of this project and analogous locations in the rest of the country.

2. Stakeholders.

Will project design include the participation of relevant stakeholders from [civil society](#) and [indigenous people](#)? (yes /no)

Key stakeholders in this project include local communities, state administrations, as well as decentralized and central government agencies. This project will also create active partnerships with NGOs and CBOs at the local and national level, as well as private sector partners in the project sites.

³¹ No-regret options are those that are justified by current climate conditions and further justified when climate change is considered, e.g. pollution reduction in water supplies will be beneficial if water supplies decrease as a result of climate change. Lim, B, and E. Spanger-Siegrfried. 2004. Adaptation policy frameworks for climate change: developing strategies, policies and measures. Cambridge University Press, Cambridge, UK pp 253.

Stakeholder type	Stakeholder list	Possible contributions and roles in the programme
Government ministries (at central and decentralized levels)	Ministry of Agriculture and Food Security, Ministry of Education and Instructions, Ministry of Irrigation and Water Resources, Ministry of Environment and Forestry, Ministry of Finance, Taxation and Economic Planning Ministry of Foreign Affairs and International Cooperation; Ministry of Gender, Child and Social Welfare; Ministry of Health; Ministry of Higher Education, Science and Technology; Ministry of Humanitarian Affairs and Disaster Management; Ministry of Information and Broadcasting Ministry of Wildlife Conservation and Tourism; Ministry of Mining; Ministry of Petroleum; Ministry of Livestock and Fisheries Industries; Ministry Energy and Dams; Ministry of Housing, Land and Urban Development; Ministry of Transport; Ministry of Roads and Bridges	Delivery of technical components of project according to sectoral expertise; provision of technical advice; realisation of scientific studies; coordination with local authorities and mobilisation of human and financial resources.
Other relevant government institutions and entities	South Sudan Department of Meteorological Service; University of Juba; University of Upper Nile; Dr. Garang University of Science and Technology; University of Bahr el Ghazal; Kagelu Institution of Forestry	Beneficiaries of capacity building initiatives and training; scientific monitoring.
State and local administrations	State line Ministries; County administrations Payam authorities	Beneficiaries of capacity building initiatives; local coordination; authorisations and permits.
Community-level stakeholders	Natural resources user groups Religious leaders Village leaders Women's groups CBOs	Community mobilisation; delivery of programme components; beneficiaries of capacity building.
NGOs and programmes	OXFAM Nile Basin Initiative The Sudd Institute ACTED Concern Worldwide World Vision South Sudan CARE International Women for Women International ADRA South Sudan IGAD Climate Predictions & Applications Centre (ICPAC) FAO	Beneficiaries of training; trainers and social mobilisation; delivery of alternative livelihoods training and assets; monitoring of ecological conditions, early warning information and systems, and participation in environmental rehabilitation initiatives.

3. Gender Considerations.

Are gender considerations taken into account? (yes /no).

Women provide the bulk of agricultural labor in South Sudan and in many cases are head of their household. Building skills in climate-smart agricultural practices will provide disproportionate welfare gain to women. In South Sudan, men and women play different roles in contributing to livelihoods. Men have responsibilities as decision-makers for the communities and their families, while women are responsible for farming, and collecting water and fuelwood. Consequently, the livelihoods of women – and the members of their households – are vulnerable to the effects that climate change will have on climate-sensitive resources like rain-fed crops, water and natural forests. In times of resource scarcity, often the women are the first to suffer from hunger and malnutrition. It is therefore important to consider women when designing and implementing climate change adaptation interventions. The LDCF project will address the vulnerability of women to climate change by mainstreaming gender considerations into the design and implementation of project activities. In particular, women and women-headed households will be targeted for the livelihood development and climate-smart agriculture activities of the project. These activities will align with the National Gender Policy, which is based on the principles of: i) the Transitional Constitution; ii) the Bill of Rights; iii) the United Nations Convention on the Elimination of all forms of Discrimination against Women (CEDAW); iv) the Beijing Platform for Action (BPFA); and v) the Protocol to the African charter on Human and People’s Rights of Women in Africa (Maputo Protocol).

To integrate gender consideration into relevant activities within Component 1, the LDCF project will carry out a gender gap analysis during the PPG phase, collaborating with the Ministry of Gender, Child and Social Welfare on relevant activities. In this gap analysis, women and men will be consulted separately on preferences for land use planning, to design implementation strategies for ecosystem rehabilitation and for priority alternative livelihoods to be supported by the project. Management and leadership positions within community groups will be promoted for both women and men. Gender-specific indicators and targets will be developed to monitor the effectiveness of the adaptation interventions for women and men implemented under Component 3.

4. Risks.

The risks, ratings and countermeasures identified below will be updated and validated during the PPG phase.

Risk	Rating	Risk category	Countermeasure
Civil strife or social unrest may prevent interventions from taking place	High	Social	Through consultations with local stakeholders, pilot interventions will be situated in areas that have been free of conflict and have a low likelihood of future conflict. The formation of the Transitional Government of National Unity is likely to reduce this risk.. The project may also consider how risks could be reduced by working in landscapes where there are protected areas and which could protect certain activities within an EbA landscape planning model.

Local stakeholders resist implementation of proposed climate change adaptation interventions	Medium	Social	<p>Active participation of local stakeholders throughout the design, implementation and monitoring of the project.</p> <p>Capacity building and training of relevant stakeholders (e.g. local authorities and communities) to increase their understanding and awareness of the benefits of climate change adaptation interventions, and their ability to effectively implement, use and maintain the adaptation interventions.</p> <p>Implementation of public awareness programmes on the effects of climate change and the benefits of climate change adaptation interventions.</p> <p>Demonstration of the benefits of climate change interventions in pilot sites.</p>
Limited technical capacity of institutions to undertake rigorous scientific research	Medium	Institutional	Identify capable human resources to establish and implement long-term climate change adaptation and hydro-meteorological research programmes in relevant institutions. Roles and responsibilities of each participating stakeholder will be agreed upon before the start of the project and explored in the PPG phase.
Funding may not be available for subsequent phases	Medium	Economic	<p>An upscaling strategy will be developed and institutionalised. This strategy will include planning for future funding.</p> <p>Climate change adaptation interventions will be mainstreamed into policies and awareness raising will be conducted for decision-makers.</p>
Other economic developments, such as oil, may compete with the implementation of the projects activities	Medium	Economic	The project will include a forest inventory that will be used to demarcate the boundaries of forests. A proposal for a mandate to prevent these areas from any economic development that would jeopardize the functioning of forest ecosystems will be put to stakeholders.
High staff turnover in the government departments and implementing agencies	Medium	Organisational	<p>Supporting relationships including deputies and alternative representation will be recommended and established during project inception to ensure sufficient continuity.</p> <p>Handbooks and training toolkits developed in English to guide new staff to the proposed project.</p>
Variation and limitation in technical capacity will reduce the efficiency of the project implementation	Low	Technical	<p>Local authorities and communities will be trained in the design, planning and implementation of climate change adaptation interventions.</p> <p>International experts will be engaged to mentor and train local authorities in implementing climate change adaptation interventions where national expertise is not available.</p> <p>Lessons-learned will be disseminated to facilitate knowledge sharing and capacity building.</p>
Unclear land laws, land tenure and demarcation of land. Currently there is confusion between the constitution's and the 2009 Land Act's versions of land ownership in South Sudan	Medium	Institutional/Social	Land tenure rights and laws will be consulted, as well as relevant Ministries, in order to guide pilot site selection.

Natural hazards such as flooding and drought could affect EbA activities	Low	Natural	Ensure that EbA activities take into account and integrate climate and early warning information.
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5. Coordination.

There are several GEF and non-GEF projects currently implemented in South Sudan that focus on climate change adaptation, government capacity and the environment. The LDCF project will build on and coordinate with these ongoing projects and initiatives in the following ways: i) under Component 1, the policy and institutional process will develop capacities to integrate the results delivered from other adaptation initiatives in the country for policy and strategy development, ii) Under Component 3, the project could benefit from the lessons learned from other interventions; and iii) to work with the institutional mechanisms or infrastructure that other projects may have developed, for example on market value addition or hydromet network development. See Appendix 1 for a full list of aligned initiatives and a description of how the project will coordinate with these initiatives.

6. Consistency with National Priorities.

Is the project consistent with the National strategies and plans or reports and assessments under relevant conventions? (yes /no)

The LDCF project is aligned with the strategies, plans and reports described in the table below.

National Strategies and Plans	Consistency
National Adaptation Programme of Action (NAPA)	The proposed LDCF-financed project is aligned with/addresses the following priority projects in the NAPA: 1, Promotion of reforestation and agroforestry to reduce vulnerability to droughts and floods; 3, Promotion of climate-smart agricultural techniques to improve livelihoods and food security under changing climatic patterns; 4, Establish improved drought and flood Early Warning Systems in South Sudan through improved hydro-meteorological monitoring network; and 5, Strengthening the institutional capacity of the Government of South Sudan for adaptation planning and to integrate climate change into national policy and development planning processes.
Sustainable Development Goals (SDGs)	The proposed LDCF-financed project will contribute towards achieving: SDG 2 – Zero hunger; SDG 5 – Gender Equality; SDG 11 – Sustainable cities and communities; SDG 13 – Climate action; SDG 12 – Responsible consumption and production; and SDG 15 – Life on land.
Comprehensive Agriculture Master Plan (CAMP)	The proposed LDCF-financed project is consistent with the forestry and crop sub-sector of this plan.
South Sudan National Environment Policy	The proposed LDCF-financed project will contribute to the objectives of the South Sudan National Environment Policy, namely: i) development of a national strategy for climate change adaptation and mitigation; ii) formulation of a climate change policy for South Sudan; and iii) support to efforts to reduce community vulnerability to climate variability and change.
South Sudan Development Plan 2011–2016 (SSDP)	The proposed LDCF-financed project will contribute to the objectives of the SSDP, namely: i) acceding to and ratifying applicable and beneficial multilateral environmental treaties; ii) ensuring economic development is environmentally sustainable; and iii) developing a national early warning system and enhancing environmental awareness to reduce risks and disasters.
Draft National Disaster Risk Management Policy ³² supported by UNESCO	The proposed LDCF-financed project will contribute to the main pillars of the draft policy which are i) capacity building of the nation to be prepared for disasters, ii) ensure that South Sudan have an effective early warning system to predict disasters, and iii) to have the ability to mobilize resources when disasters occur.

³² The draft disaster risk management policy supported by the UNESCO will be discussed in a public hearing in December 2016 before being taken to parliament for deliberation.

Transitional Constitution of the Republic of South Sudan, 2011	The proposed LDCF- financed project will contribute to legislative measures that call to (a) prevent pollution and ecological degradation; (b) promote conservation; and (c) secure ecologically sustainable development and use of natural resources while promoting rational economic and social development so as to protect genetic stability and bio-diversity
National Adaptation Plan (NAP) due to start later in 2017)	This project will both benefit from and generate useful learning for the NAP process. It will work with the coordination structures established under the NAP process and generate information and experience that will be relevant for consideration of planning work to be done under the NAP process.

7. Knowledge Management.

Knowledge management will be an important consideration under all three components of the LDCF project. The project will generate knowledge products including *inter alia* climate risk assessment for policy makers under Components 1 and 3, research products in the environmental, meteorological and adaptation spheres and academic courses that integrate international knowledge and best practice with country-level research and experience under Component 3; protocols for climate-resilient forest restoration under Component . The project will also develop a system to track indicators that measure the effectiveness of investments in ecosystem function in helping communities to buffer extreme events and contribute to livelihoods, and support a systems that links this up to policy-makers to strengthen the science-policy linkages.

All knowledge products generated by the LDCF project will: i) build on existing learning materials, including within government, academic institutions and ongoing projects; ii) focus on capturing evidence-based knowledge of climate change adaptation; iii) include gender considerations wherever necessary; and iv) include local and indigenous knowledge when appropriate. The knowledge generated through the LDCF project will be disseminated in a manner that is easily accessible to the public and government, including through: i) awareness-raising campaigns; ii) training programmes; and iii) existing structures such as the South Sudan NGO Forum. The knowledge products generated by the project will also be tailored according to the technical capacity and level of literacy of targeted stakeholders. Such material will inform the climate change policy-and decision-making as well as the implementation of climate change adaptation interventions. The PPG phase will add more definition to the knowledge management strategy by identifying partnerships to help deliver on the various aspects of this strategy detailed here.

PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

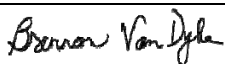
A. RECORD OF ENDORSEMENT³³ OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):

(Please attach the [Operational Focal Point endorsement letter](#)(s) with this template. For SGP, use this [SGP OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
DAVID BATALI OLIVER	DIRECTOR FOR POLLUTION CONTROL AND GLOBAL ENVIRONMENT FACILITY OPERATIONAL FOCAL POINT	MINISTRY OF ENVIRONMENT	04/12/2016

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF policies³⁴ and procedures and meets the GEF criteria for project identification and preparation under GEF-6.

Agency Coordinator, Agency name	Signature	Date (MM/dd/yyyy)	Project Contact Person	Telephone	Email
Brennan Van Dyke Chief, Strategic Donor Partnerships and Global Funds Coordination UNEP		March 6, 2017	Jessica Troni Portfolio Manager	+254 0795751062	Jessica.troni@outlook.com

C. ADDITIONAL GEF PROJECT AGENCY CERTIFICATION (APPLICABLE ONLY TO NEWLY ACCREDITED GEF PROJECT AGENCIES)

For newly accredited GEF Project Agencies, please download and fill up the required [GEF Project Agency Certification of Ceiling Information Template](#) to be attached as an annex to the PIF.

³³ For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required even though there may not be a STAR allocation associated with the project.

³⁴ GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF

APPENDIX 1: COORDINATION WITH OTHER GEF AND NON-GEF PROJECT

The LDCF project will coordinate with the following ongoing initiatives:

The **hydromet-information network system establishment programme (HINSEP)** of the **Irrigation Development Master Plan (IDMP)** (short term: 2015–2020; \$7,418,000) is implemented by the Ministry of Irrigation and Water Resources and aims to establish a functional centralized hydromet information network system for effective and efficient irrigation development and management. The focus of HINSEP is to support the other IDMP programmes, and in particular, to provide the information necessary for updating irrigation development plans. The LDCF project will align the establishment of hydro-meteorological monitoring network under Component 2 with the expansion plan detailed by the HINSEP.

The **‘Sustainable Agricultural Development through Strengthening Extension, Inputs Supply and Services’ (Sustainable Agriculture Project)** (2016 – 2019, 12,500,000 Euros) is funded by the European Union and implemented by the Food and Agriculture Organisation (FAO). This project aims to enable rural producers in the greater Bahr el Ghazal to increase agricultural production and productivity, as well as agriculture-based incomes on an economically viable and environmentally sustainable basis by enhancing the capacity of agro dealers and private service providers to timely and continuously deliver required inputs, equipment and services in good quality and at competitive prices. The LDCF project will build on the activities of the Sustainable Agriculture Project by integrating lessons learned and best practice in South Sudan into the climate-smart agricultural techniques implemented in the target sites. In addition, alternative livelihoods promoted by the LDCF project will draw on the agricultural produce markets strengthened by the Sustainable Agriculture Project.

The UNEP-GEF (Trust Fund) project **“National Capacity Self-Assessment (NCSA) for Global Environmental Management in South Sudan”** aims to take stock of South Sudan’s existing capacities and specific capacity needs and priorities, as it moves to implement multilateral environmental Conventions to which it is a signatory. The LDCF project will consult with this project to collate information on capacity needs of government, with specific reference to climate change adaptation.

The UNEP-GEF (Trust Fund) project **“Umbrella Programme for Biennial Update Report to the United Nations Framework Convention on Climate Change (UNFCCC)”**. The objective of the project is to provide financial and technical support to 35 Least Developed Countries (LDCs) and Small Islands Developing States (SIDS) to prepare and submit initial biennial update reports to the United Nations Framework Convention on Climate Change (UNFCCC), with South Sudan being one of those LDCs. The LDCF project will collaborate with this project to strengthen the technical capacity of the GoSS to produce reports in line with UNFCCC requirements.

Building Resilience and Adaptation to Climate Extremes and Disasters (BRACED) is funded by the Department for International Development (DFID) and aims to improve the resilience of farmers and agro-pastoralists – especially women and children – to drought and floods in South Sudan. It is implemented by a consortium comprised of Concern Worldwide, ACTED, FAO and The Sudd Institute. The LDCF project will seek collaboration with BRACED during the PPG phase.

The **FAO Sustainable Food Security through Community-Based Livelihood Development and Water Harvesting in South Sudan - II** (2016 -2018), which aims to strengthen resilience of communities in GPAA and Kapoeta to drought and other shocks.

The **IGAD Climate Prediction and Applications Centre (ICPAC)**, whose mission is to provide timely climate early warning information and support specific sector applications to enable the region cope with various risks associated with extreme climate variability and change for poverty alleviation, environment management and sustainable development of the member countries.

FEWS NET, the Famine Early Warning Systems Network, aims to provide early warning and analysis on acute food insecurity. Created in 1985 and funded by the [US Agency for International Development](#) (USAID) after devastating

famines in East and West Africa, FEWS NET provides objective, evidence-based analysis to help government decision-makers and relief agencies plan for and respond to humanitarian crises.