

Sustainable Natural Resource and Livelihood Adaptive Programme (SNRLAP)

Part I: Project Information

GEF ID

10350

Project Type

MSP

Type of Trust Fund

LDCF

CBIT/NGI

☐ CBIT

☐ NGI

Project Title

Sustainable Natural Resource and Livelihood Adaptive Programme (SNRLAP)

Countries

Sudan

Agency(ies)

IFAD

Other Executing Partner(s)

Federal Ministry of Agriculture and Forestry (FMoAF)

Executing Partner Type

Government

GEF Focal Area

Climate Change

Taxonomy

Climate Change, Focal Areas, Climate Change Adaptation, Climate resilience, Least Developed Countries, Food Security, Land Degradation, Influencing models, Stakeholders, Beneficiaries, Type of Engagement, Consultation, Information Dissemination, Participation, Communications, Awareness Raising, Local Communities, Gender Equality, Access and control over natural resources, Gender results areas, Participation and leadership, Gender Mainstreaming, Sex-disaggregated indicators, Capacity, Knowledge and Research, Capacity Development, Enabling Activities

Rio Markers**Climate Change Mitigation**

Climate Change Mitigation 0

Climate Change Adaptation

Climate Change Adaptation 2

Duration

72 In Months

Agency Fee(\$)

190,000.00

Submission Date

8/12/2020

A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
CCA-1	LDCF	1,629,000.00	64,800,000.00
CCA-2	LDCF	371,000.00	12,160,000.00
Total Project Cost (\$)		2,000,000.00	76,960,000.00

B. Indicative Project description summary

Project Objective

Strengthening resilience of local communities to climate change in the Butana, Sennar and Kordofan regions

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
Component 1 Scaling up climate adaptation and resilient community based natural resources management and businesses models	Technical Assistance	Outcome 1 Increased production and resilience of targeted communities and households	Output 1.1 Inter-community framework for adaptation, NRM and land-use governance effectively implemented using the ecosystem approach <i>- 150 cluster/ network NR and Land-Use Management Plans (NRLMP) with CCA mainstreamed developed and implemented</i> <i>- 72,000 community members have their NR ownership or user rights secured via registration of community forests and rangelands)</i> <i>- 72,000 community members are reporting reduction in dispute over use of land and NR</i>	LDC F	1,560,000.00	55,600,000.00

Output 1.2 Access to technical assistance and finance facilitated to support climate-smart agriculture (CSA) and the implementation of Livelihood Investment Plans (LIP) aligned with NRLMPs

- Around 2,850 ha of land brought under climate resilience management

- 20,000 women and 7,200 vulnerable people receive climate-smart packages for Jubraka

Component 2 Strengthening the institutional framework for scaling up community based NRM	Technical Assistance	Outcome 2	Output 2.1	LDC F	320,000.00	12,060,000.00
		Legal, policy and institutional framework for scaling up climate change adaptation and community based NRM improved and adopted	NR and CCA legal and policy frameworks strengthened			
		- At least 10 institutions at federal, state and locality level have their NR regulations and policies well integrated, coordinated and coherent both at the vertical and the horizontal level of governance.	- Existing Early Warning Systems strengthened and expanded to cover SNRLP beneficiaries.			
			- 10 other policy relevant knowledge products.			
			Output 2.2			
			Institutions capacitated on community-based climate change adaptation and NR governance, management and suitable technology related issues.			
Sub Total (\$)					1,880,000.00	67,660,000.00
Project Management Cost (PMC)						
LDCF					120,000.00	9,300,000.00
Sub Total(\$)					120,000.00	9,300,000.00
Total Project Cost(\$)					2,000,000.00	76,960,000.00

C. Indicative sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
GEF Agency	IFAD	Grant	Investment mobilized	63,000,000.00
Recipient Country Government	Government of Sudan	Grant	Recurrent expenditures	13,960,000.00
Total Project Cost(\$)				76,960,000.00

Describe how any "Investment Mobilized" was identified

IFAD mobilizes resources from its Trust Fund, replenished every three years and allocated per country according to its PBAS (Performance-Based Allocation System), a calculation method analogous to GEF's STAR allocations.

D. Indicative Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
IFAD	LDCF	Sudan	Climate Change	NA	2,000,000	190,000	2,190,000.00
Total GEF Resources(\$)					2,000,000.00	190,000.00	2,190,000.00

E. Project Preparation Grant (PPG)
PPG Required



PPG Amount (\$)				PPG Agency Fee (\$)			
Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
Total Project Costs(\$)					0.00	0.00	0.00

Core Indicators

Indicator 3 Area of land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
0.00	0.00	0.00	0.00

Indicator 3.1 Area of degraded agricultural land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 3.2 Area of Forest and Forest Land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 3.3 Area of natural grass and shrublands restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 3.4 Area of wetlands (incl. estuaries, mangroves) restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 4 Area of landscapes under improved practices (hectares; excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
0.00	0.00	0.00	0.00

Indicator 4.1 Area of landscapes under improved management to benefit biodiversity (hectares, qualitative assessment, non-certified)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 4.2 Area of landscapes that meets national or international third party certification that incorporates biodiversity considerations (hectares)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Type/Name of Third Party Certification

Indicator 4.3 Area of landscapes under sustainable land management in production systems

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 4.4 Area of High Conservation Value Forest (HCVF) loss avoided

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Documents (Please upload document(s) that justifies the HCVF)

Title	Submitted

Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female				
Male				
Total	0	0	0	0

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided

LDCF-SCCF results framework indicators to be used for the project and added as annexed additional documentation alongside this PIF.

Part II. Project Justification

1a. Project Description

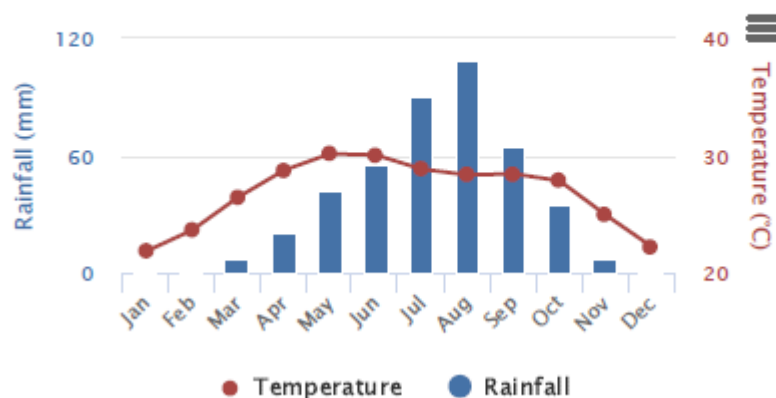
1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed

Sudan is the third largest country in Africa. The total land area is 1,765,048 Km² and stretches over land between latitudes 10°N and 23°N and longitudes 21°45'E and 38°30'E. Most of the land is composed of vast arid plains interrupted by a few widely separated ranges of hills and mountains. The current population is 41.5 million, of which 64.7 per cent is rural, 50.4 % male population and 49.6% female population. The Nile River basin contributes most of Sudan's available surface water. Water resources outside the Nile basin are limited, soil fertility is low, and recurrent drought is common. Arable land constitutes about one third of the total area of the country, with about 21% of this land under cultivation. Over 35% of the total area of Sudan consists of pasture and rangelands (FAO, SIFSIA2012), (RPGD, 2015). The agriculture sector is dominated by small-scale farmers who employ largely rain-fed and traditional agricultural practices. Over 70% of the population is dependent upon crop production and/or livestock husbandry to support their livelihoods (INCD, 2016). Its human development index of 0.47% in 2015 ranked the country 167 out of 188 countries assessed.

The Sudan's vulnerability to Climate Change has been highlighted in different documents and reports such as the 1st National Communication (2003), the National Adaptation Programme of Action (NAPA, 2007), the 2nd National Communication on Climate Change (2013) and the National Adaptation Plan (NAP, 2016).

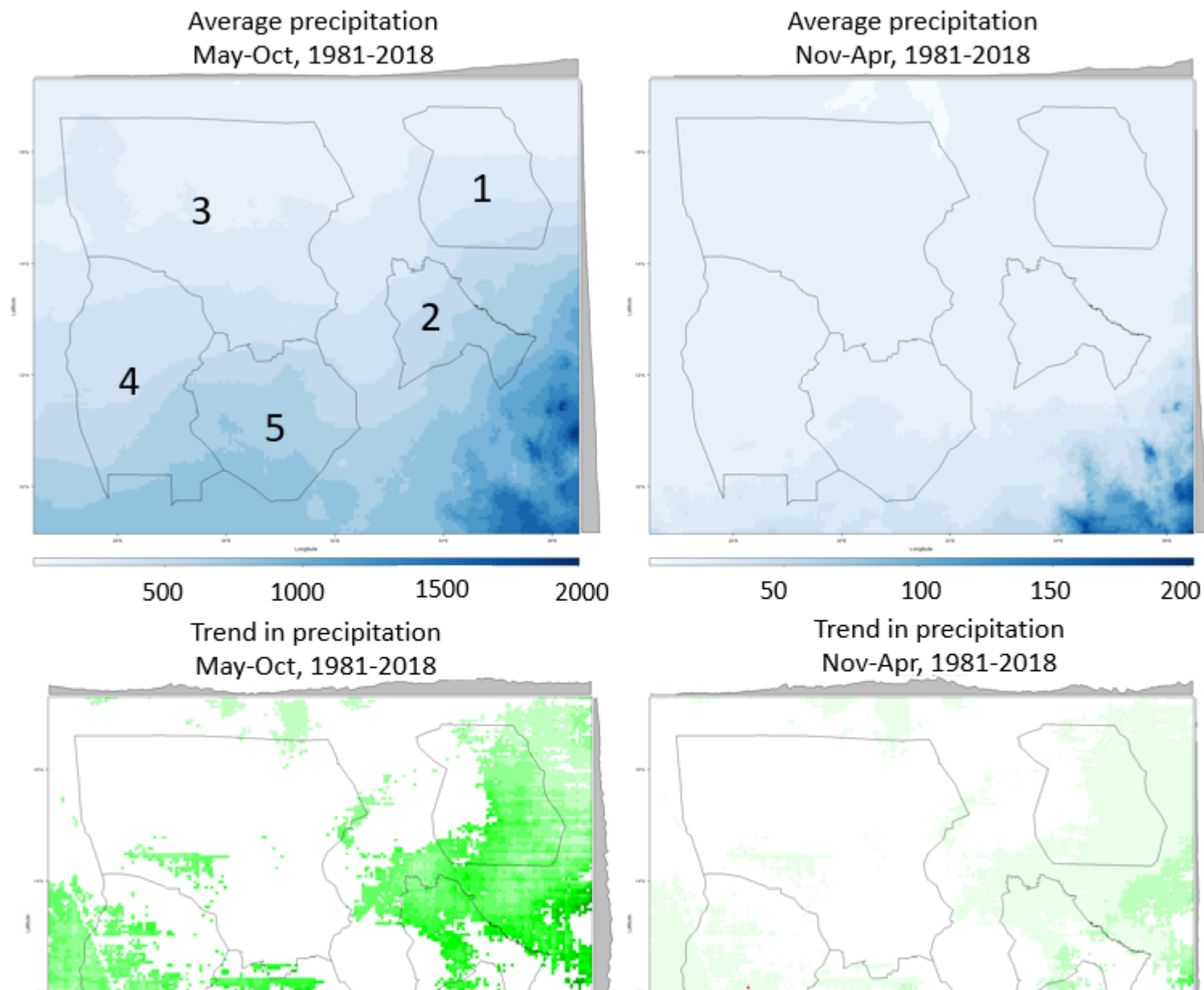
For assessment of the current climate in Sudan, six stations were selected to summarize precipitation and temperature characteristics for the period 1961 through 2010. The data analysis indicates that air temperatures have been steadily increasing in Sudan over the period 1960-2009. During both the MAMJ and JJAS periods, temperatures have been increasing between 0.2°C and 0.4°C per decade, depending on the locations within the country. When averaged across all seasons, temperatures in the 2000-2009 periods are roughly between 0.8°C and 1.6°C warmer than they were in the 1960-1969 period (2nd National Communication).

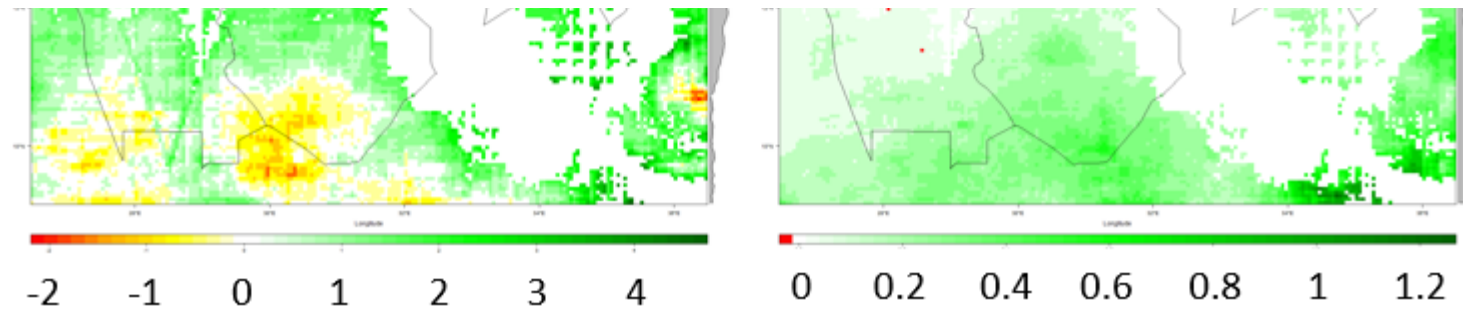
**Average Monthly Temperature and Rainfall
for Sudan from 1901-2015**



The climate change analysis for Sudan highlights the following characteristics:

- There is a gradient of precipitation from North to South, the North being drier than the South;
- As shown in the figures below, variability is intra-annual with two seasons, May-October wet and November-April dry. The variability is also inter-annual with a significant increase in wet season precipitation since 1981 in most of the regions. However, in the Southern part of South Kordofan the precipitation trend is significantly negative during the wet season (which could have a negative impact on water recharge of the soil and subsequently on agriculture and people).





Zones of study: 1: Butana; 2: Sennar; 3: North Kordofan; 4: West Kordofan; 5: South Kordofan. Sources: CHIRPS/Climate Hazards Group-USGS; University of East Anglia Climatic Research Unit (CRU)

For the elaboration of future scenarios, the most recent GCM outputs were obtained from the IPCC Assessment Report-5 (AR5). The Climate Model Intercomparison Project-5 (CMIP-5) data was collected for 22 GCMs for a region including Sudan (NAP, 2015). The different scenarios indicate that rainfall variability will lead to a decrease of annual rainfall of about 0.5% per year, with more frequent and intense drought trends. The consequences could be a shifting of agroclimatic zones southwards with accompanying water deficits, declining crop production with more frequent crop failures, as well as loss of range resources and livestock. There would also be increasing risks of desertification, poverty, food insecurity and famines, leading to mounting competition over resources and conflicts, human displacement and suffering (INDC, 2015).

With regard to temperature, it is projected that, by 2060, warming will range from 1.5 - 3.1 C⁰ in August to between 1.1o - 2.1 C⁰ in January (INC 2003). This will lead to increased water losses, negative impacts on the winter season crops, decline in wheat production and increased problems with weeds, pests and diseases.

With reduced groundwater recharge, due to decreased precipitation or increased temperature and evaporation, soil moisture would further decline under future climate change. Along the same lines many climatic scenarios show that water flow in the Nile River will decrease considerably, between 20% and 30% over the next 40 years. The table below lists the types of extreme weather and climate events in Sudan, their frequency, the sectors affected as well as the impact categories.

Event	Occurrence	Vulnerable areas	sectors	Impacts
Drought	Frequent	North & Western Sudan (North Kordofan and Darfur), Kassala State and some parts of the rain-fed areas in central Sudan.	Agriculture, livestock, water resources and health.	Loss of crops and livestock (food shortage), decline in the hydroelectric power, displacement wildfire.
Floods	Frequent	Areas within the River Nile basin and low areas from extreme South to far North. Mountain areas along Red Sea.	Agriculture, livestock, water resources and health.	Loss of life, crops, livestock; insects & plant diseases, epidemic/vector diseases, decline in hydro power; damage to infrastructure & settlement areas
Dust storms	Frequent	Central and northern parts of Sudan	Transport (aviation and land traffic)	Air and land traffic accidents and health.
Thunder - storms	Infrequent	Rain-fed areas throughout all Sudan	Aviation	Loss of lives and properties.
Heat waves	Rare	Northern, central parts of Sudan besides the Red Sea State.	Health, agriculture & livestock.	Loss of live, livestock and crops.
Wind-storms	Rare	Central and north central Sudan	Settlements and service infrastructure	Loss in lives, property; damage to infrastructure (electricity and telephone lines)

Source: Government of Sudan, 2007

Table: Extreme weather and climate events in Sudan types, frequency, sectors affected, and impact categories

For the three regions where the project will be implemented (Butana, Sennar and Kordofan regions) a number of climate scenarios have been developed. For Kordofan states, climate scenarios for 2030 and 2060 in Sudan's INDC project a decrease in average precipitation and an increase in average temperatures, with pronounced changes expected for Northern Kordofan (INC 2003). Alam et al (2012) confirmed these findings in modeling future climate change scenarios through 2080 in 5 locations in the Kordofan States, with the exception that rainfall and evapotranspiration rates may decrease in some localities. The major sectors impacted by climate change are agriculture, and water and health, in both Northern and Southern Kordofan. However, Northern Kordofan is considered more vulnerable due to a climate that is already prone to low rainfall and extreme temperatures.

The centrally located Kassala state is in the semi desert zone; and Al Gedarif state is a low rainfall savannah ecological zone. Of these states, Kassala is considered highly vulnerable due to high rainfall variability and increasing temperatures.

With an average annual rainfall of 613 mm/yr Gedarif state receives enough rain to sustain a healthy agricultural sector. However, Gedarif's agricultural economy, 90% of which is rainfed, is already affected by increasing rainfall variability, rising temperatures, and decreasing average rainfall. Although once one of the major producers of gum Arabic, Gedarif state has lost significant vegetation cover over the past few decades.

Sennar is a low rainfall savannah in the southeastern part of Sudan, with an average maximum temperature of 37°C; an annual minimum temperature of 20°C, and an annual rainfall of 427 mm/yr (baseline 1971-2000). Its economy depends on a mix of rainfed and irrigated agriculture, forestry, grazing and fishing. The state is vulnerable to rainfall variability, rising temperatures, increasing wind speeds and a frequent cycle of floods and drought. This combined with inadequate natural resources governance and management has led to the deterioration of rangeland and vegetation cover.

Climate variability and climate change are intensifying the ongoing process of desertification of arable areas. The shift of humid agro-climatic zones southward is rendering vast arable lands unsuitable for agriculture production. Pastoral systems are becoming less productive and losing their ability to support livelihoods of natural resources dependent communities.

Sudan's major environmental problems are deforestation (aggravated by the increasing food and energy needs of the Sudanese population), overgrazing, soil erosion, desertification and land degradation due to negative rainfall trends and increased incidence of droughts in recent decades. In arid areas, drought and anthropogenic pressures have led to declining soil fertility and water resources, low agricultural productivity and persistent food insecurity (NAP, 2015).

Barriers. Crop producing smallholder farmers, agro-pastoralists and pastoralists, are the main target groups in the areas of intervention of the project, and they are also the most vulnerable groups according to the NAPA. They encounter major development challenges related to constraints in access to and lack of governance and management of NR, climate change causing more water stress, and a poor enabling environment for sustainable development. These challenges are driving high levels of poverty and periodic food insecurity and fragility among the target groups. Productivity in rainfed cropping systems is declining due to land degradation, reduced soil fertility, inappropriate tillage practices, deteriorating seed quality and lack of knowledge on improved management practices. The carrying capacity of most of the rangeland areas can hardly support the large number of livestock: overgrazing is the most prevalent cause of desertification in almost all over Sudan. Rural youth, particularly unemployed youth, and young women, have no access to basic services or sustainable livelihood opportunities, limited or no employment opportunities, as well as limited access to capacity building or microfinance services that would enable them to establish their own businesses.

Capacity of local communities and local institutions to anticipate, and effectively respond to, climate change-induced disasters continue to be quite limited. Vulnerability of local communities to climate change is also exacerbated by the lack of information on state of natural resources, as well as lack of climate information for effective adaptation planning. In the same spirit there is no sustained process of awareness building among policymakers regarding climate-related risks.

Native Administration (NA) systems have been partly broken and, as a result, there is an inefficient legal and regulatory framework for effective natural resources management, opening the room for increasing conflicts on land use, particularly between farmers and pastoralists.

These challenges are driving high levels of poverty and periodic food insecurity and fragility among the target groups. In addition, the lack of accessible rural financial services impeded diversification of economic activities and business development.

2) The baseline

1) **Business-as-usual (BAU).** The BAU baseline assumes that future development trends will follow those of the past. For the LDCF the BAU consists of the different projects implemented by IFAD in the region as well as projects developed by other partners and institutions. The proposed project will build first of all on the on-going IFAD supported projects:

i) The **Butana Integrated Rural Development Project - BIRDP** (entered into force in July 2008, completion date September 2019) The project aims at achieving sustainable improvement in the livelihoods and drought-resilience of rural poor households and pastoralists (540 communities) in the project target area ("Butana") through establishing an effective natural resources governance framework; improving the access and bargaining position of women and men in livestock value chains marketing; and developing the capacity of communities to engage in development initiatives and management of natural resources. The total project costs are US\$29.85 million. An additional financing of US\$13.3 million was approved in 2016 and the new completion date is September 2019. The project has four main components: (i) Policy and Institution Building; (ii) Natural Resources Management; (iii) Livestock and Marketing Development; and (iv) Community Development, Business Options. BIRDP has so far made tangible achievements in terms of food security, resilience and poverty reduction, due to successful interventions in areas like water infrastructure, range and forest rehabilitation and community development.

The project's intervention around homesteads, Jubraka's, goat feeding and communal gardens are diversifying diets, and the project has been particularly successful in strengthening Community Development Committees (CDC) and through them active community participation in project interventions, especially by women.

There is a clear need to upscale the most successful activities implemented by BIRDP to other States and regions in Sudan and to build on lessons learned, particularly from CDCs and Jubrakas activities.

ii) **Supporting Traditional Rainfed Small-Scale Producers in Sinnar State - SUSTAIN**, (2011-2018) is financed by an IFAD DSF grant of USD 13.54 million. SUSTAIN responds to the alarming levels of land degradation in Sinnar State by introducing environment friendly and productivity enhancing technical packages and mobilizing concerted efforts to formulate a regulatory framework for the development of both smallholder and large-scale farming in a way that conserves the environment. The project comprises 3 components: 1) Technology transfer (on-farm demonstrations, home garden (jubraka) cultivation, range rehabilitation, forestry enrichment and forage production, animal health and production, scaling-up of conservation agriculture (CA)); 2) Market access and post-harvest management (improvement of traditional grain storage facilities, demonstration of sun dryers); 3) Capacity building and institutions strengthening (mobilization and formation of VDCs, community training, community environmental conservation fund, land use and investment map (LUIM)).

The project has done an excellent job in implementing activities such as on-farm demonstrations, Jubraka cultivation, forestry development, animal health, community development, but failed in scaling up of Conservation Agriculture (CA) technologies at the level of smallholder farmers, which is a major activity. Much remains to be done in order to ensure sustainability, scalability, effectiveness, and efficiency of the achievements.

iii) The **Livestock Marketing and Resilience Programme - LMRP** (entered into force in March 2015, completion date March 2022) is a USD 119.2 million programme aiming at Increasing food security, incomes and climate resilience for poor households in pastoralist communities. Its development objective is to increase earning opportunities and improve living conditions in livestock-based communities. LMRP is concentrated on the heartland of the semi-arid livestock producing areas in the south of Sudan. The three complementary components of the LMRP are (i) Livestock business development, (ii) Community-led natural resource management and enhanced adaptive capacities and (iii) Rural enterprise and social development. The geographical coverage of the Programme is national with respect to policy aspects of livestock sector development and natural resource management in the context of climate change, and area-specific for direct community-level interventions, initially in selected Localities in the five States of West Kordofan, North Kordofan, White Nile, Sennar and Blue Nile. The ASAP component of the project allowed some clear results in terms of increase in rangeland productivity in target areas, in number of ha of rangelands under climate-resilient management practices, and in community groups engaged in climate risk management planning.

Under LMRP's component two, the set-up of a Drought Monitoring, Preparedness and Early Response System (DMPERS) is under preparation. After initial delays, the University of Khartoum Consultancy Corporation has recently been selected to build a system for weather and hazard prediction, specifically geared towards the livestock and pasture sector in Sudan. The DMPERS will provide policymakers, technicians, village development committees, pastoralists and other rural stakeholders with the most up-to-date and accurate information available on meteorological-related risks, so that disasters can be minimized or avoided. DMPERS will comprise four components: (1) an Automated Weather Forecasting System (AWFS); (2) an Integrated model of derived variables (DVM); (3) a GIS (Geographical Information System) platform to adapt the information to the user's needs and to facilitate its management; as well as a (4) product dissemination system, including radio, community organizations, SMS and the THABIT service of the Sudanese Mobile Company. LMRP is currently waiting for the Technical and Financial Proposal of the mentioned service provider.

iv) The **Integrated Agriculture and Marketing Development Project – IAMDP** (entered into force in February 2018, completion date March 2024) is a US\$ 47.5 million project implemented in the four states of Sinnar, North Kordofan, South Kordofan, and West Kordofan. The goal of the IAMDP is to enhance food security and reduce poverty in poor rural households, through investment in crop production, marketing and capacity building of public and private service providers. Project objectives would be met through better access to improved agricultural inputs and services, enhanced business skills, access to rural finance and appropriate marketing support, and better organisation of producer's associations. Building on achievements and lessons learned from implementation of SUSTAIN and other IFAD past projects the rationale for IAMDP is to consolidate the investment activities supported by the ending projects; and (ii) move from demonstration to scale-up in the same and additional geographical areas where other smallholder farmers face similar challenges such as low crop productivity, limited access to market and finance, and vulnerability to climate change. *Although based on SUSTAIN results the IAMDP doesn't address the issue of upscaling the successful results of SUSTAIN regarding the implementation of natural resource investment plans.*

v) The **Climate Risk Finance for Sustainable and Climate Resilient Rainfed Farming and Pastoral Systems Project** (2014 – 2020) is a US\$ 24.6 million project, funded by GEF and LDCF and supervised by UNDP, operating in the states of North Kordofan, River Nile, White Nile, Gedaref, Kassala and South Darfur. It aims to create an enabling environment for climate risk management of smallholder farmers and pastoralists in rain-fed areas. This will include the establishment of an effective climate observation and early warning infrastructure to enable climate change resilient decision-making in local communities. At the same time, the project will create a regulatory framework to develop and deliver micro-credit and climate risk insurance services. Therefore, it cooperates, inter alia, with the Meteorological Authority, the Remote Sensing Authority, the Ministry of Agriculture and Ministry of Irrigation and the Agricultural Research

Corporation. The project's three components are: (i) Creation of the institutional framework and capacity for sustainable climate observation and early warning; (ii) Design and deployment of weather index-based insurance to address residual risk and promote long term adaptation; (iii) Provision of financial services for farmers and pastoralists to increase adaptive capacity of rural livelihoods. Interest has been expressed in a cooperation with IFAD to carry forward the project's legacy after its end in 2020. It has been suggested that IFAD could help expanding the project geographically (to other localities in the states or to new states) and/or to new insurance products for other crops. Also, IFAD could finance additional weather stations to improve the accuracy of information, organize more capacity building training events, and organize international exchange visits to other countries with similar experiences.

vi) The World Bank project entitled **Sudan Sustainable Natural Resources Management Project - SSNRMP** (2013-2019). This project is implemented in the Butana, Kordofan and the White Nile regions. The SSNRMP is a USD 7,7 Million project aiming at increasing the adoption of sustainable land and water management practices in targeted landscape. An Additional funding of USD 5,9 Million has been allocated to the SSNRMP by the GEF for a four-year period starting in 2018. The SSNRMP has the following objectives: Assist communities in preparing and implementing investments under integrated land management and resilience planning; Manage, monitor and maintain soil and water conservation structures in collaboration with Village Development Committees (VDCs) and: Address climate-induced diseases including Malaria as well. As the SSNRMP and the SNRLP will be implemented in the same regions there will need a strong collaboration between the 2 projects.

The BAU scenario leaves significant adaptation gaps unaddressed. The danger is to reach contradictory results due to fragmented approaches. Because of the different sectoral and thematic approaches taken by the projects, climate change adaptation is not being addressed in a holistic and integrated way as a general constraint affecting all the regions.

3) The proposed alternative scenario with a brief description of expected outcomes and components of the project;

3.1. The Sustainable Natural Resources and Livelihoods Programme (SNRLP)

In order to address critical gaps identified in the adaptation baseline, IFAD and the GoS have agreed on the **Sustainable Natural Resources and Livelihoods Programme (SNRLP, 2019-2024)**, a 63 Million USD grant from IFAD. The programme goal is to enhance food security, incomes and resilience of pastoralist, agro-pastoralist and crop producing smallholder farmers. The Development Objective of the project is to increase the adoption of natural resources management practices, technologies and business models enhancing NR sustainable use and securing access for vulnerable resources users.

The SNRLP, with the support of the LDCF under the SNRLAP (the SNRLP and SNRLAP will be implemented jointly), will develop an innovative ecosystem approach that goes beyond sectoral approaches as developed in previous IFAD projects. The SNRLP aims at upscaling successful results achieved by the different projects and developing an integrated approach at the landscape level, as well as linking local actors to national and federal institutions in the decision-making processes related to natural resource management. The SNRLP will support mainstreaming of natural resource management and climate change issues into development planning processes, for strengthening the resilience of poor farmers and pastoralists, and to ensure shared and commonly agreed sustainable management approaches for these resources. Regarding the target groups, the SNRLP will primarily support the most vulnerable groups - women, youth and pastoralists - through improving access to economic assets and strengthening their involvement in decision making processes at the different levels.

The SNLRP will be implemented mainly in the rainfed parts of nine states in the Butana, Sennar and Kordofan regions. In the Butana region the project will cover the Kassala, River Nile, Khartoum, Al Jazirah, and Gadaref States. In the Sennar region the project will focus on the Sennar State and in the Kordofan region it will be implemented in the North, South and West Kordofan States. In addition to these nine states the project will engage with the White Nile and the Blue Nile States in the Sennar region regarding inter-state NR governance and regulatory issues.

The programme will have two interlinked technical components (C1 and C2) and a project management component.

C1: Scaling up community-based NR management and businesses: C1 will focus at consolidating and upscaling existing good practices in Sudan for empowering communities and networks or clusters of communities and build their capacities in land-use planning and NR governance and management, that takes into account climate change risks.

SC 1.1 related to community mobilization, NR and land-use management planning will support the development of an estimated 1,000 Village Development Committees (VDCs), other relevant community organizations and networks or clusters of VDCs with the objective to strengthen their organisation in Cluster Development Committees or Network Executive Committees (CDC/NECs) and their land and NR governance systems and institutions. Support will be provided for mobilizing VDCs and CDC/NECs sharing NRs in common ecosystems and with common interests in addressing governance and management issues; participatory development of NR and land-use management plans (NRLMPs) for village networks or clusters; development of co-management arrangement for the "open access" common areas outside traditional village managed land (hema); land registration; mitigation and resolution of conflict over access to and use of NR; and the formulation of livelihoods investment plans (LIPs).

SC 1.2 will support the different interest and NRM groups to implement their LIP activities eligible within the areas of rangeland and livestock rearing; forestland conservation and related businesses; catchment and water point management; cropland development and climate adaptation in farming practices; and stock routes management and livelihoods of pastoralists. Within these categories SNRLP will provide technical assistance (TA) and seed capital financing for four ownership and investment types: i) public or common good investments managed by CDC/NECs or VDCs in partnership with NRLGs ii) common good investments for group enterprises managed by NRLGs, VSCGs or VWGs; iii) small start-up inputs for individual household owned production activities supported through NRLGs or VSCGs groups and iv) Community Investment Funds (CIF) managed by VDCs as revolving funds in particular supporting organized vulnerable women (VWGs) who cannot meet requirements for accessing micro finance institutions. SNRLP will support enterprise training and business development activities in the clusters or networks in order to develop the capacity of the groups and individuals to implement the NR related enterprises successfully. To support extension services to VDCs, CDC/NECs and various NR and common interest groups the SNRLP will scale up the good experiences of the BIRDP in engaging youth as extension resource persons and young professionals.

C2: Improving the institutional framework for upscaling community based NRM: This component will support institutional capacity strengthening and policy engagement from local to State and Federal levels in order to institutionalize and scale up proven community and inter-community land and NR governance and management models. The expected outcome is an improved legal, policy and institutional framework for scaling up climate change adaptation and community based natural resource management. It will build on models proven to secure access and benefits to poorer rural communities from previous IFAD projects and build on and complement the activities supported under C1. It will create an enabling environment for community institutions, native administrations, locality governments and civil society organizations to better engage in policy formulation and implementation processes at State and Federal level. Simultaneously, it will strengthen the capacity of the latter levels for facilitating these processes.

SC 2.1 focusing on strengthening of legal and policy framework will support a participatory review of land and NR governance policies and frameworks, strengthen early warning infrastructure, and establish an institutional structure for a comprehensive multisector and multilevel consultation and discussion process which will lead to the formulation of focused strategies and revision of policies and regulations. The component will also complement and support ongoing or proposed policy engagement processes supported by Federal and State government and other development partners, including in particular those of other IFAD supported projects, FAO, UNEP, UNDP, and the World Bank and national and international research institutions.

SC 2.2, building institutional capacities will focus on generating and disseminating knowledge products, fostering dialogue and establishing or supporting multi-stakeholder platforms. Training will be provided to public and private extension service providers and Locality, State and Federal government staff. Training will also be provided in knowledge management, communication, monitoring and impact evaluation for documenting and disseminating lessons from programme interventions.

The principal target group of SNRLP/SNRLAP will be poor men and women smallholder farmers, settled agro-pastoralists whose main source of livelihoods is traditional rainfed agriculture, livestock and forest-based activities, especially gum Arabic. Pastoralists and mobile communities will be treated as a priority target group wherever relevant. It is worth noting that these groups correspond to the most vulnerable groups according to the NAPA, for which rainfed farmers and pastoralists are typically the least able to cope with climate-related shocks in Sudan.

SNRLP will be implemented in 200-300 networks or clusters of villages reaching at least 1000 villages of which 40-50% will be previously supported IFAD project villages and the remaining will be new. In the clusters or networks with IFAD supported villages the project will consolidate and fill gaps in previous project investments in particular in relation to social infrastructure development and strengthening of NR governance and management arrangements and mechanisms.

The expected key outcomes of the programme are as follow: 1) Increased production from scaling up community-based natural resources governance arrangements and management practices, technologies and businesses; 2) Institutional framework for upscaling community based NRM improved.

Conflict resolution mechanism.

The SNRLP will address the conflicts issues directly under its subcomponent 1.2 "Implementation of NR-based Livelihood Investment Plans - Stock routes management and livelihoods of pastoralists". This will include: training of conflict mediators and establishment of conflict resolution centers in conflict prone areas along the stock routes (SR); establishment and management of water points outside Hemas including water management committees with representation of all SR users; training of young community para veterinarians and establishment of veterinary services centers with access for mobile pastoralists; organisation of Pastoral Field Schools (PFS) for capacity building and investments with pastoralists in their livelihoods; and nutrition training for pastoralist women and facilitation of exchange of food and recipe among pastoralist, agropastoralist and smallholder farmers along the routes.

Moreover the subcomponent 2.1 of the SNRLP "Strengthening of legal and policy frameworks" will perform a revision of locality level land-use zoning plans and related regulations to incorporate community cluster/network NRLMPs as part of the revision of policy and legislative frameworks. A priority state for this activity will be the Gedaff state where mechanised farming is causing rapid land-use changes, exclusion and potential conflicts. Maps and information on the revised associated land use regulatory frameworks will be disseminated widely, including at Locality and community levels. Mechanisms will be set up for monitoring and providing feedback on any further encroachment of livestock routes and 'open access' rangeland or forest areas. This will link to the institutional strengthening described in the subcomponent 2.2 of the SNRLP.

Likewise state level land use zoning plans and related regulations will be revised with particular attention given to identifying 'open access' common rangeland and forest areas and livestock routes, especially those that are being encroached on by semi-mechanized or mechanized crop farming or urban expansion. The project will support an appropriately costed (affordable) updating or revision of these plans. Information from cluster/network and Locality NR governance and spatial planning processes will also be incorporated.

3.2 The added value of the LCDP

The BAU scenario leaves significant adaptation gaps unaddressed, in particular the need for a scale up of existing successful practices, and a more integrated approach. The proposed alternative will be supported by IFAD through the Sustainable Natural Resources and Livelihoods Programme (SNRLP) and by the LCDP, providing key additional resources in line with the GEF/LDCF priorities.

Although the SNRLP aims to address most of the adaptation gaps identified in the agricultural sector, specific improvements are needed in order to strategically align and make all SNRLP investments supportive of climate change adaptation. The LCDP resources will finance strategic actions that will allow the structuring and orienting of the SNRLP investments in accordance with NAPA priorities. To this end, the LCDP resources will be targeted upstream and support technical assistance and capacity building to ensure that climate change vulnerability analysis will be included in the preparation of the natural resource and land-use management plans (NRLMPs) for each cluster or network of villages. Likewise, the LCDP resources will support the subsequent livelihood investments plans under the NRLMPs to ensure that they adequately address climate change adaptation priorities. The LCDP project will also build local actors' capacities to play a proactive and qualitative role in the formulation of the NRLMP, and identifying and guiding investments needed in adaptation measures. Using the gender transformative approach, it will focus on supporting women and women-headed households, one of the most vulnerable groups to climate change identified by the NAPA. The LCDP will also complements the SNRLP by strengthening resilience of local communities through the implementation of a drought and flood monitoring system.

The LCDP project, SNRLAP, will be fully integrated into the different components of the SNRLP that provides co-financing for the LCDP investment. The PMC will cover the cost of a project coordinator who will be in charge of SNRLAP project and its alignment with the SNRLP activities. The USD 120,000 budget will cover the salary of the coordinator as well as the field and travel allowances to execute the project, the costs are aligned with salaries and field and travel allowances of the Project Management Unit of the SNRLP as per IFAD guidelines. Further, as stated in the GEF "Rules and guidelines for agency fees and project management costs", the PMC costs are not more than 10% of the grant and the coordinator will not be seconded from the government. Full details and breakdown of PMC costs will be provided in the full project document.

Component 1. Upscaling of community based natural resources management practices, technologies and business models

Under this component the SNRLP will support CDCs and networks or clusters of CDCs in strengthening their NR governance and management capacities as well as investing in rehabilitation, adoption of new technologies and the development of small businesses.

Outcome 1. Increased production and resilience of targeted communities and households

The LDCF resources will support building community capacities and institutions (Village Development Committees (VDC), Community Development Committees (CDCs), networks of CDCs or clusters of villages) for developing Natural Resource and Land-Use Management Plans (NRLMPs) where CCA is mainstreamed. To this end, the LDCF will build on the on-going and previous IFAD projects developed in the region by supporting the consolidation of the results achieved so far.

Output 1.1 Inter-community framework for NR and land-use governance effectively implemented using the ecosystem approach

The SNRLP will support Village Development Committees (VDCs), networks or clusters of VDCs in the participatory formulation of natural resource and land-use management plans (NRLMPs) for villages and village networks or clusters, land registration, as well as the formulation of livelihoods investment plans. Within this framework the LDCF will support mainstreaming of climate vulnerability analysis and adaptation measures in the development of NRLMPs. The integration of Climate Change Adaptation into the development planning process will be realized along with identification of existing land and natural resource use and users, analysis of the main challenges and opportunities associated with these uses, identification and prioritization of interventions and investments for improving productivity and sustainability, including improvements of livelihoods opportunities.

Added value of the LCDF - The LDCF will promote the ecosystem approach for addressing natural resources management in the project area. The landscape approach will be used for identifying networks/clusters of communities sharing and using a common (agro-)ecosystem, including rangelands, forests, water resources or farmland. Based on the landscape approach supported by LDCF resources, the SNRLP will be implemented in networks or clusters with high poverty levels where the natural resources base is under pressure due to high dependence on natural resources for livelihoods, climate change, desertification and conflicts. It is expected that at the end of the project, 140 cluster/ network NR and Land-Use Management Plans (NRLMP) with CCA mainstreamed are being implemented.

Output 1.2 Access to technical assistance and finance facilitated to support climate-smart agriculture (CSA) and the implementation of Livelihood Investment Plans (LIP) aligned with NRLMPs

Based on the land-use and NR governance and management framework and priority interventions identified in the NRLMP, different NRM and interest groups will be formed at village and cross village level who would like to come forward and propose ideas for Livelihood Investment Plans. The SNRLP will provide technical assistance and facilitate access to financing for NRM, business and saving groups for the implementation of actions in the different areas: rangeland, forestland, livestock corridors, water harvesting, catchment conservation, adoption of soil and water management and climate resilient practices in crop farming including terraces, conservation agriculture, crop rotation and intercropping with climate adapted varieties, IPM and other agro-ecological practices, as well innovations in alternative livelihoods and technologies (aquaculture, solar energy, small scale community biogas systems...). Likewise, the project will engage microfinance institutions (such as ABSUMI, Baraa, etc.) to provide financial support for beneficiary groups based on their investment planning under the Natural Resource Management and Livelihood Investment Plans.

Added value of the LCDF - Based on the experience gained by IFAD in previous projects, the LDCF will target women, and women-headed households, as a specific vulnerable group and a key actor in adaptation to climate change and food security at the household level. Women members of the household have home garden land (jubraka) and usually cultivate horticulture crops and sorghum for home consumption and sale of small surpluses. It is a main source of income for the women. The LDCF will support the promotion of jubraka cultivation for enhanced nutrition and food security leading to enhanced well-being and nutrition of women and children in particular.

The LDCF will support an in-depth contextual analysis fed by lessons learned from past IFAD projects such as SUSTAIN. By addressing the specific needs and realities of women and men in the particular social context of the region the project will seek to transform gender roles and promote more gender-equitable relationships between men and women. The approach will go beyond the individual level to focus on interpersonal, social, structural, and institutional

practices to address gender inequalities. In the context of adaptation to climate change this action will be carried out together with the promotion of Climate Smart Agriculture (CSA). CSA appears to be the most promising approach to developing the technical, policy, and investment conditions - the enabling environment - to support actions aimed at achieving sustainable agricultural development for food and nutrition security under a changing climate.

Activities will be designed to facilitate self-targeting through use of appropriate channels, gender-sensitive delivery systems (e.g. delivering training at village level), capacity-building tailored to the needs of women. The support will include: organisation of women in farmer field schools (FFS) groups for experimental learning in jubrakas cultivation of vegetable, fodder and other crops, the use of climate adapted soil and water management techniques, intercropping, tree windbreaks with nitrogen fixing fodder trees species or other species with food or economic value, and integrated pest management (IPM); investment in the establishment of community jubrakas including fencing and water source using solar pumps; training crop producer groups in the introduction of trees, soil and water management practices, IPM and drought resilient varieties in open field farming; and construction of small soil management and water harvesting structures e.g. stone or earth bunds and planting terraces; small businesses related to processing and marketing of crop products and provision of quality seeds inputs, biopesticides and machinery services.

Component 2: Improving the institutional framework for upscaling community based NRM

Under this component the SNRLP will support state and federal government institutions in improving the enabling environment for institutionalizing and upscaling proven NR governance and management models improving the status of the NRs, and securing access and benefits to the poorer communities.

Outcome 2: Legal, policy and institutional framework for scaling up climate change adaptation and community based NRM improved

Since the “ecosystem approach” will be the driver for network or cluster selection, the LDCF project will support the mapping of ecosystems zones in the targeted area, including agroecological zones, livestock routes, as well as climate change and environmental vulnerability. A specific focus will be given to mapping livestock routes, as a tool for conflict resolution and support to decision making.

Output 2.1: NR legal and policy frameworks strengthened

Both the Second National Communication to the UNFCCC (SNC,2013) and the National Adaptation Plan (NAP, 2014) illustrate that the frequency of extreme climatic shocks is increasing, particularly droughts and floods. Frequent drought threatens about 19 million hectares of rainfed mechanized and traditional farms, as well as the livelihoods of many pastoral and nomadic groups; more than 70% of Sudan’s population’s livelihood depends on this sector. Floods in Sudan can either be localized caused by exceptionally heavy rainfall or more widespread, caused by the overflow of the River Nile and its tributaries (NAPA, 2007).

Added value of the LDCF - The LDCF project will strengthen the existing Early Warning System (EWS) infrastructure in Sudan as a major element of disaster risk reduction. The aim of the activity is to directly support the participatory review of land and NR governance policies and frameworks by getting a clear picture of the vulnerability of the different pastoralist and other agricultural zones, as a tool for negotiation and sustainable solutions. The component will establish an institutional structure for a comprehensive multisector and multilevel consultation and discussion process. The LDCF activity, in order to support this process, will gather essential data and will document them to serve as knowledge base for the formulation of focused strategies and revision of policies and regulations. The drought and flood monitoring system that will be developed will prevent the loss of life and reduce the economic impact of disasters by warning local communities of drought and flood risks, improving their preparedness and decreasing risks associated with crop and food loss. The LDCF will build on the early warning infrastructure built by the GEF-funded Climate Risk Finance for Sustainable and Climate Resilient Rainfed Farming and Pastoral Systems Project as well as LMRP's Drought Monitoring, Preparedness and Early Response System (DMPERS), strengthen its capacities and expand it to the whole SNRLP area. In a first step, a thorough needs assessment will identify existing gaps and potential interventions to improve the existing infrastructure built by the two above-mentioned projects, focusing on the four inter-related elements: risk knowledge (data should be systematically collected and analyzed and risk assessments performed), monitoring and warning service (the system should be in place to monitor hazards and provide early warning services), dissemination and communication, and response capability.

A functioning Geographic Information System (GIS) is an important part of any early warning system to help local institutions and communities to base their decisions for land-use on sound and accurate information. Therefore, the project will address the gaps in existing efforts to establish an integrated GIS system for early warning purposes and support the mapping of land uses, agro-ecological zones, livestock routes, climatic changes and environmental vulnerability. Such tools, besides the obvious usefulness for planners, will allow inserting the local actions within an integrated and ecosystem vision of natural resources

management and adaptation to climate change. A special attention will be given to mapping the livestock routes, pastoralists being one of the most vulnerable groups. Indeed, the region targeted by the programme is crossed by many livestock routes, which pass through vulnerable areas which have been affected by drought and rainfall reduction, negatively impacting the quantity and quality of livestock production. It is thus important to get a clear picture of the vulnerability of the different zones traversed by the livestock routes, as a tool for negotiation and sustainable solutions. This will lead to enhance climate resilience of livestock routes and pastoralists through sustainable rangeland and water management investments.

Depending on the outcomes of the needs assessment, other potential interventions to strengthen the capacities of existing early warning systems in Sudan, could focus, inter alia, on improving the data collection infrastructure (e.g. by purchasing and installing additional weather stations, etc.), the data analysis and forecasting capacities (e.g. by providing better or additional hardware and software components, capacity building measures for the Meteorological Authority and other institutions, etc.) and/or existing communication and response capacities (e.g. by providing better infrastructure, capacity-building measures, international exchange visits, etc.).

IFAD will partner with both of the above-mentioned initiatives as well as the Meteorological Authority, the Remote Sensing Authority, the Ministry of Agriculture and Ministry of Irrigation and the Agricultural Research Corporation to identify and address the needs in the existing early warning infrastructure. Further, the SNRPL will partner with ICRAF, which is undertaking the same exercise in Chad in two IFAD funded projects (PARSAT and RePER), and other potentially relevant institutions active in the targeted areas and involved in early warning activities, such as FAO and UNEP.

Output 2.2 Institutions capacitated on community-based climate change adaptation and NR governance, management and suitable technology related issues.

The SNRLP will enhance communities' capacities and skills pertaining to advocacy, solidarity, lobbying and networking around key NR issues of common concern and interest; and support community-based organizational structures and institutions through building their institutional capacities to build up, strengthen and institutionalize their different forms of NR-based networks.

4) Alignment with GEF focal area and/or Impact Program strategies

The project is fully aligned with the CCA Objective 1 "Reduce the vulnerability of people, livelihoods, physical assets and natural systems to the adverse effects of climate change through transfer of technologies and innovative practices for adaptation". The LDCF project will address vulnerability and security concerns related to climate adaptation by supporting the implementation of an early warning system to inform decision and policy making. The LDCF is also contributing to CCA Objective 1 in terms of support to women, the most vulnerable group identified by the NAPA, to improve their access to new technologies and economic assets linked to the development of home gardens (jubraka).

The LDCF support is also aligned with CCA 2 "Increase adaptive capacity to respond to CC impacts, including variability, at local, national, regional, global level". The LDCF will ensure the systematic integration of climate change adaptation into the Natural Resources and Livelihood Plans which will contribute to reducing vulnerability to climate change. The SNRLP will finance the implementation of the adopted NRLP including mainstreaming of climate change adaptation. This is aligned with the CCA-2, emphasizing the ability to prepare for and respond to the concrete risks and losses related to climate change and variability. In addition, and in support of CCA 2 objectives, the data collected through the early warning system will feed into the M&E system put in place by the SNRLP. This will help decision makers and stakeholders to monitor and evaluate progress of adaptation processes at the sub-national and sectoral levels, and to review and strengthen their adaptation strategies.

The project is aligned with the national priorities of the NAPA, the NAP and the three National Communications to UNFCCC. The project will contribute to the achievement of Sudan's INDC based on the objective of Sudan's NAP, i.e. to contribute to sustainable development and reduce poverty by reducing the long-term negative impacts of climate change. The LDCF project will build on the SNRLP IFAD programme and its activities will be blended with the components and subcomponents of the SNRLP. Co-financing requirements are met and cost-effectiveness aspects have been carefully considered.

5) Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing;

The SNRLP programme is expected to have a positive impact on nutrition through facilitating access to increased incomes from agricultural production and small businesses, increased availability of food, provision of water, labour saving machinery, and renewable energy (solar and gas). More specifically, Component 1 of the SNRLP on "Upscaling of community based natural resources management practices, technologies and businesses" aims at supporting different NRM and interest groups in implementing livelihood investment plans improving benefit streams derived from natural resources and integrated production systems and related small businesses.

Within this component the LDCF/SNRLAP will focus its financial resources on key priorities that affect the effectiveness and efficiency of the overall SNRLP investments. The first priority is related to the integration of climate change adaptation into the local natural resource management plans. By funding this activity, the LDCF ensures that all the investments from the SNRLP take into account climate change adaptation and are contributing to strengthening of the resilience of local population to climate change.

The LDCF/SNRLAP will also target one the most vulnerable groups, women, and ensure that they will fully benefit from SNRLP investments. Women will be supported through specific and tailored trainings, access to technologies and economic assets, in view of empowering them as full economic actors. Concerning pastoralists, an increasingly marginalized group in Sudan, the LDCF resources will support a diagnostic analysis which maps their location and characteristics in the selected localities, analyzing their specific priorities and issues and identifying strategies and investment opportunities benefitting them.

The Component 2 of the SNRLP, "Improving the institutional framework for upscaling community based NRM", will create an enabling environment for community institutions and organizations, native administrations, Local Governments and civil society organizations to better engage in policy formulation and implementation at State and Federal level while at the same time strengthening the capacity of the latter to facilitate land and NRM policy formulation and implementation.

In this perspective the additional funds provided by the LDCF/SNRLAP will support development of information systems and analytical studies as vital tools for creating sustainable development, for analysis and assessment of results and impacts in the field. The GIS will allow the systematic data collection and analysis, as well as the dissemination of information products (maps, reports, etc.) for decision makers at all levels. The LDCF will also support baseline mapping of environmental governance and Climate change in project areas in order to allow the monitoring and evaluation of the SNRLP results.

6) Global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF);

The SNRLP, with the support of the SNRLAP, is expected to generate the following benefits in the project area; i) 150 natural resource and land-use management plans (NRLMPs) and Livelihood Investment Plans integrating Climate Change Adaptation and implemented in the three regions and 10 Policy-relevant knowledge products completed; ii) 99,200 individual members will benefit from the LDCF activities and will increase their resilience and will be assessed by a resilience monitoring scorecard to be defined during detailed design (a total of 720,000 individual members of households headed by small crop farmers, agropastoralists and pastoralists (50% women) will receive services promoted by the full IFAD and LDCF blended project). This provides a non linear representation of beneficiaries to funding ratio, with LDCF resources contributing 2.3% of total funding, but reaching 13.8% of total beneficiaries of the blended project. iv) These benefits will materialize because households reached will have improved their access to land, forest, and/or water resources for production purposes, adopted environmentally sustainable and climate resilient technologies and practices, and will have experienced an increase in production.

The project is expected to have a positive impact on nutrition through increased incomes from agricultural production and small businesses, increased availability of food, provision of water, labour saving machinery, renewable energy (solar and gas), GALS training to facilitate women's empowerment and more equitable distribution of responsibilities and resources, as well as nutrition awareness training.

7) Innovation, sustainability and potential for scaling up;

The LDCF/SNRLAP project is embedded in the IFAD SNRLP programme which will build on the lessons learned and experiences from initiatives supported by IFAD, government and other development partners. The programme will focus on upscaling and consolidating NR governance, management and business models for wider adoption with emphasis on activities and strategies that increase the participation and opportunities for women and youth and more vulnerable resources users. To support extension services to CDCs, network or cluster committees and common interest investment groups, the project will upscale successful approaches where young people from the villages are trained as extension resource persons in the different activities prioritized by their communities.

At the same time the project will bring innovations contributing in particular to community resilience through alternative livelihoods, income streams and by addressing adaptation needs to the increasing challenges from climate change impacts. In this regard the LDCF project will support the valorization of traditional knowledge and best practices on land and water management by documenting them and ensuring their dissemination through diverse means such

as trainings, information sessions and learning tours. The project will bring innovations in alternative livelihoods and technologies by promoting new activities such as aquaculture, as well as use of renewable energy: solar energy, small scale community biogas systems with co-benefits for manure and nutrient recycling.

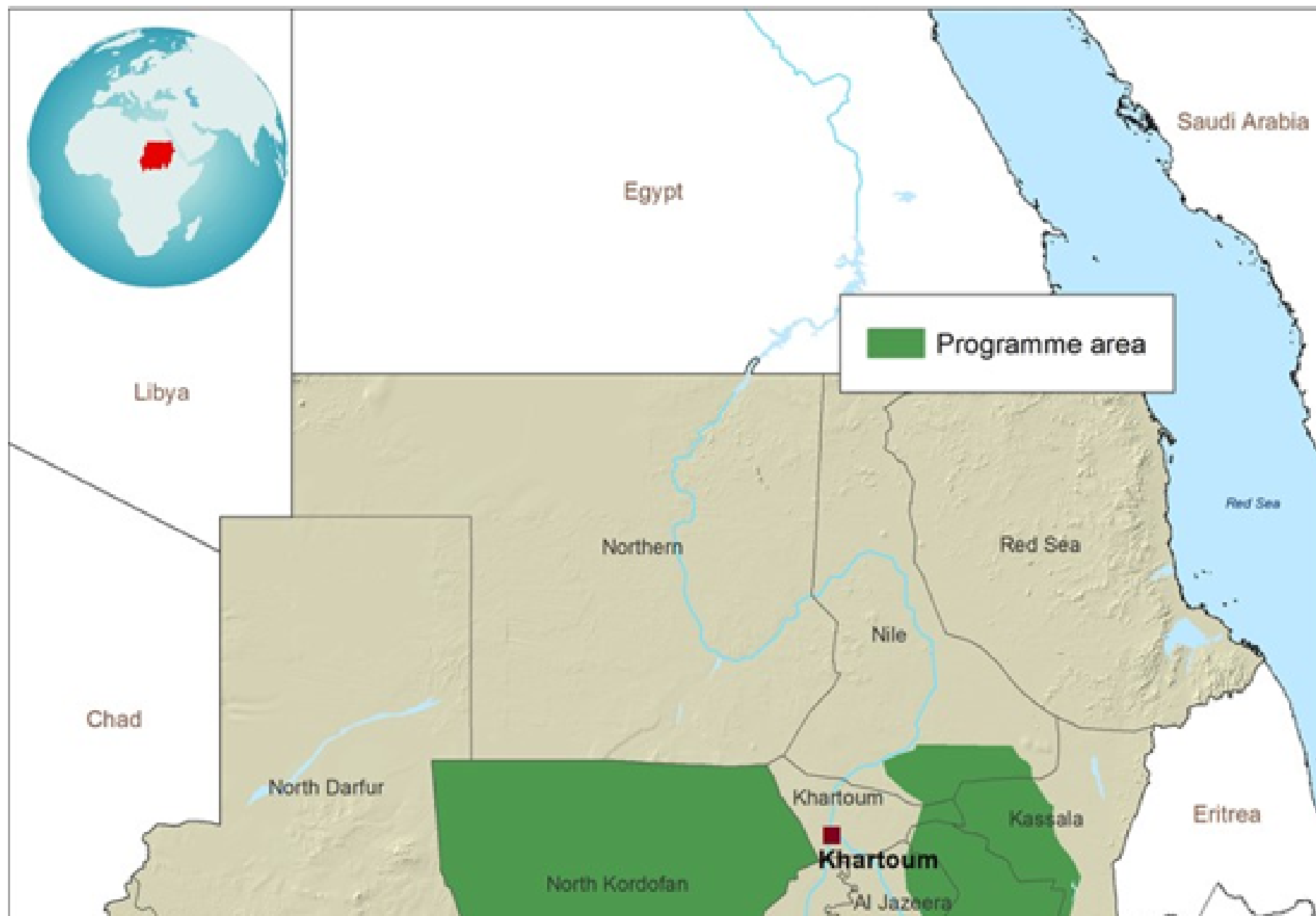
In terms of local development and natural resource management the network/cluster approach to improved NR governance and management and livelihood investments is an innovation already proven to be effective in empowering poor rural communities and build their capacities for more resilient livelihoods. The project will use the network/cluster approach, identifying and including villages using common natural resources and strengthening or creating institutions at the village and inter village level to promote collective management. These networks or clusters will become models of NR governance and management, showcasing the sustainability of previous investments and acting as catalysts for change for other clusters. In addition, the project will adopt an ecosystem approach: the common ecosystem approach will be the driver for network or cluster selection. Thanks to this approach it will be possible to select the clusters or networks across the administrative boundaries of the localities.

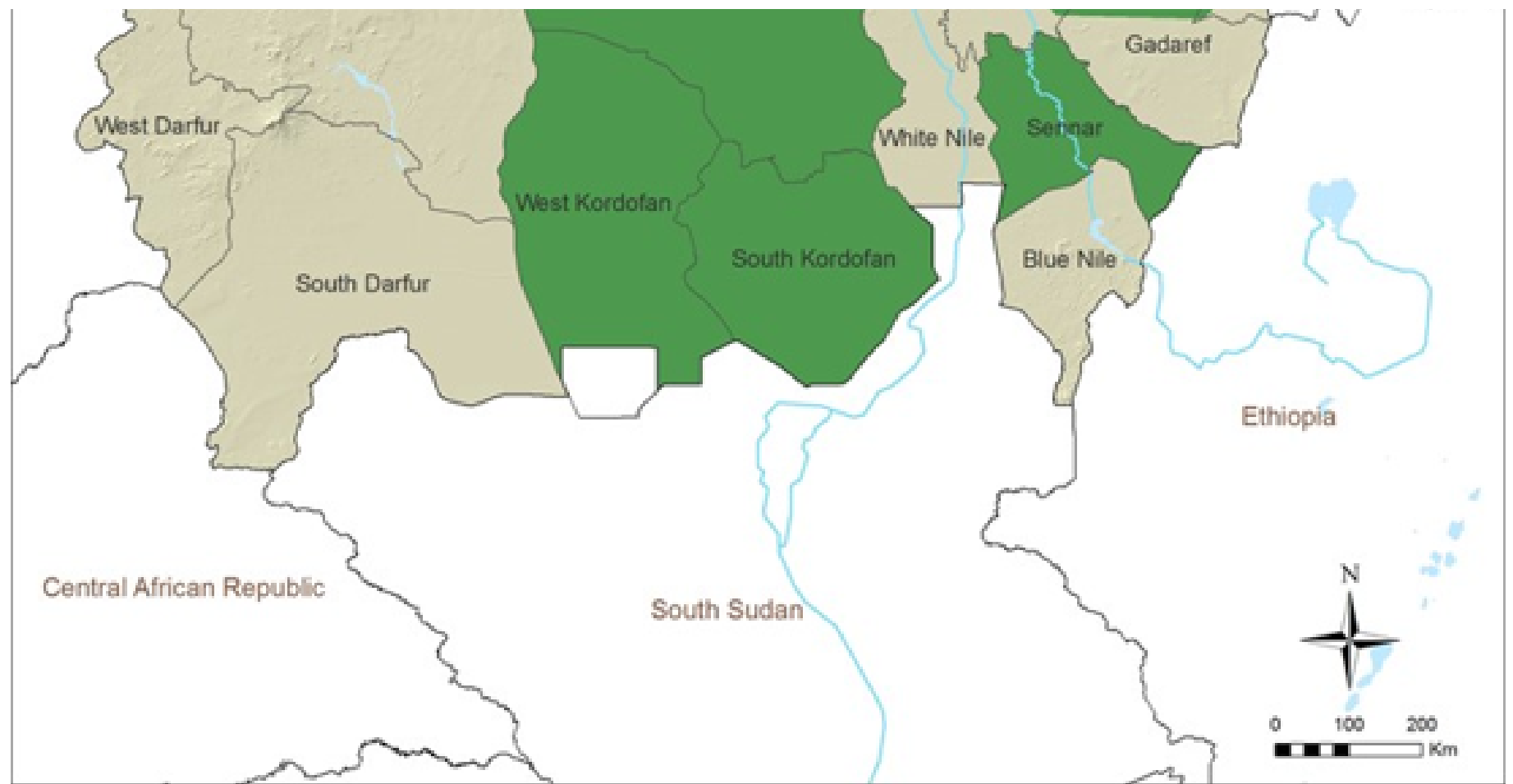
Various interventions, including previous and current IFAD projects, investing in water infrastructures in rural areas have built community-based models for water management and revenue generation for O&M costs, depreciation costs and reinvestment in further expanding water distribution infrastructures. Likewise, different models have also been developed and implemented for the management of other NRs including rangeland and forest. To capitalize on these experiences and in order to facilitate their scaling up, the programme will support the relevant government institutions in each region in the establishment of a framework and guidelines for revenue generation for O&M and depreciation costs but also for reinvestment in land and NR use and management by communities. This could include collecting of fees and tariffs for water use, harvesting of non-timber forest products, sustainable harvesting of wood from community forests, access to grazing and community forest fodder buffer, etc. Guidance would include percentage allocation of revenue generated to community, cluster/network, Locality and higher levels and safeguards for ensuring that an adequate proportion is re-invested in measures for improving sustainable land and NR use.

Furthermore, the programme completion review is a process undertaken by the Government of Sudan in close coordination with IFAD at the end of the implementation cycle in order to report on the results achieved through programme interventions. The learning dimension of this process should be emphasized since it provides useful information for improvements in future programme/project designs and programming. The completion review process is also critical for identifying opportunities for scaling-up of best practices. As already mentioned, this phase is crucial particularly to enhance the sustainability of programme interventions. The Completion exercise provides all stakeholders with a unique opportunity to reflect on overall programme design and performance, and generate useful lessons learnt from implementation. Key findings of the completion review will be reported and analysed in the Programme Completion Report (PCR).

1b. Project Map and Coordinates

Please provide geo-referenced information and map where the project interventions will take place.





2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Indigenous Peoples and Local Communities Yes

Civil Society Organizations Yes

Private Sector Entities Yes

If none of the above, please explain why:

In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement.

The team consulted communities during the identification phase in Gadaref, Khartoum, Gazera, Sennar and North Kordofan States. Consultations were held with IFAD project staff in these states, local government officials and at least two communities in each state. The agenda of the meetings covered previous experiences of NRM in IFAD projects, government NRM policies. The agenda in the community level focused on i) traditional NRM arrangements ii) collaboration of communities with the government for enforcing NRM policies iii) NRM based enterprises and incomes iv) gender involvement in NRM aspects.

The principal target group of the project will be poor men and women smallholder farmers, settled agro-pastoralists whose main source of livelihoods is traditional rain-fed agriculture, livestock and forest-based activities, especially gum Arabic. Pastoralists and mobile communities will be treated as a priority target group wherever relevant. This target group will be continuously involved in all the phases of the project, from the design to the implementation and its monitoring and evaluation. In addition, the table below presents the other different stakeholders with their respective role in the project.

Stakeholder	Role in the project
The Higher Council of Environment and Natural resources (HCENR)	The HCENR is the central institution concerned with policies, legislation and strategic planning in relation to environmental and natural resources conservation and management. The HCENR is specifically responsible for planning, coordination and control of implementation of policies in the fields of land management, forestry, environment, conservation areas and rural development. The HCENR will particularly assess the compliance of the project activities with the relevant national policies on environment and climate change.
The Federal Ministry of Finance and Economic Planning (MoFEP)	The MoFEP will be the recipient of the IFAD grant/loan and will carry out annually joint missions with IFAD on the performance and fiduciary aspects of the project
The Federal Ministry of Agriculture and Forestry (FMoAF)	The FMoAF will be the technical lead agency and will chair the Inter-ministerial Committee, which oversees and supports all IFAD-Co-financed projects
The local Governments in the States where the project will be implemented.	The focus will be on strengthening their role in facilitating linkages between communities and the State governments around land and natural resource policy issues and development services but also in facilitating linkages between communities across Localities
Native administrations	Attention will be given to identifying and strengthening their traditional and existing roles in supporting the governance of land and natural resources (especially in dispute and conflict resolution)
Communities	Past experiences proved that communities are active agents of change. Their capacities will be strengthened on NRM and land-use governance within and between communities. They will play a key role in solving conflicts over resources and land use. The project will raise communities awareness of the new legal opportunities for securing their land rights.
The private sector	Will be involved as service providers of machinery, veterinary, input supply, innovation and alternative livelihoods and technologies and other services
The CBOs	They will be instrumental in project implementation and policy dialogue at local level.
Women and youth groups	(Mentioned below)

3. Gender Equality and Women's Empowerment

Briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis).

In the IFAD Strategic Framework 2016-2025, gender equality is identified as one of the five principles of engagement at the core of IFAD's identity and values. IFAD complies with the United Nations commitments on gender mainstreaming, including the United Nations System-wide Action Plan (UN-SWAP) on gender equality and the empowerment of women. In IFAD's development activities, gender mainstreaming ensures that the differentiated needs and priorities of rural women and men are identified and taken fully into account in the design, implementation, monitoring and evaluation of all activities.

In this framework, the Sudan Country Strategic Opportunities Programme (COSOP) for the period 2013 – 2020, which is the IFAD strategy with the government of Sudan for the engagement of IFAD funding, provides an overview of poverty and its gender dimensions and outline targeting and gender strategies. Implementing the COSOP, the SNRLP has identified needs and priorities of rural poor women and men (with age dimension).

The LDCF will allow a better participation of women as well as strengthening the capacity to face the risk of male takeover if women's economic activities increase in value and/or become more profitable. To address this risk the programme will develop a gender-sensitive programming and the inclusion of women in defining access to resources ensuring their rights. To ensure to women a concrete access to economic activities the LDCF includes an output/activity geared to train women's groups in production of seedlings and operation of tree nurseries, and overall farming practices. Because gender-transformative approaches seek to change rigid gender roles and relations, the project will identify and analyze the underlying causes of gender inequality that is rooted in socioeconomic and cultural structures. The LDCF will promote an integrated, gender transformative approach going beyond women's empowerment, to promoting women's greater equality, responsibilities, status and access to and control over resources, services and decision-making. Based on the LDCF results the SNRLP will support: i) women groups (80% women headed-households) for setting up farms to generate income; ii) food availability in villages which have the highest rates of malnutrition ; (ii) women groups to set up nurseries (ix) women and youth groups to set up businesses through matching grants and business mentorship with priority given to businesses that reduce pressure on natural resources such as production of green charcoal, manufacturing bricks, LPG refilling stimulations, etc.

The M&E system will be participatory, decentralized and relevant data, analysis and reporting will be disaggregated by gender and age, and with specific gender indicators. The results will also be disaggregated by gender. For instance, in terms of global benefits it is foreseen 75,000 small crop farmers, agropastoralists and pastoralists (of which at least 30% women and 30% youth) will receive services promoted by the project.

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment? Yes

closing gender gaps in access to and control over natural resources; Yes

improving women's participation and decision-making; and/or Yes

generating socio-economic benefits or services for women. Yes

Will the project's results framework or logical framework include gender-sensitive indicators?

Yes

4. Private sector engagement

Will there be private sector engagement in the project?

Yes

Please briefly explain the rationale behind your answer.

The private sector (agribusinesses, input suppliers, marketing partners, extension service providers) will be an important actor during the phase of implementation of the Community NRM and Livelihood Investment plans. The private sector will be strengthened, as needed, to provide services in terms of innovation and alternative livelihoods and technologies such as: aquaculture, solar energy, small scale community biogas systems, etc. The programme will also promote links between beneficiary natural resources management, business and saving groups and private service providers of machinery, veterinary, input supply and other services.

5. Risks to Achieving Project Objectives

Indicate risks, including climate change, potential social and environmental risks that might prevent the Project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the Project design (table format acceptable)

The table below presents the different risks identified for the project, their rating as well as the mitigation measures anticipated.

Project risks

Risk	Risk mitigation	Rating
Climate Change related risks: Increasing temperatures, rainfall variability and prolonged dry spells and droughts resulting in crop failure and low rangeland productivity negatively affecting the livelihoods of the target group.	Promoting sustainable and climate resilient agricultural practices (rangeland rehabilitation and management preserving buffer areas for dry years, terraces, conservation agriculture, crop rotation and intercropping with climate adapted varieties, composting, water harvesting, IPM and other agroecological practices such as permaculture)	Medium
Macro-economic and financial instability, fluctuating exchange rate and inflation	Community-based implementation, using commercial bank accounts to avoid disadvantageous exchange rate of Central Bank of Sudan, mobilization of co-financing, obtaining high-level governmental support	High
Lack of governmental commitment to policy change	Preparation of policy-relevant knowledge products based on project evidence, promoting inclusive policy dialogue, integrating perspectives of different stakeholders, proper coordination between different stakeholders, building institutional capacities	Low
Lack of implementation of policy changes	Promoting effective governance mechanisms with appropriate incentives for implementation, building institutional capacities	High
Lack of follow up, participation and ownership of the local population	Promoting participatory project approaches, organizing bottom-up community mobilization, capacity building and awareness-raising, building on best practice examples of previous successful IFAD-funded projects, using demonstrations to encourage voluntary imitation	Medium
Land conflicts between different resource users (crop farmers and pastoralists)	Community and intercommunity participatory land use mapping and planning, negotiation and agreements on user rights backed up by a conflict resolution mechanism, involvement of mobile pastoralist communities in all stages of land-use governance and management	Medium
Limited social capital and capabilities of the communities in new villages	Local capacity building, community trainings, putting emphasis on practical knowledge, demonstration and exchange with other communities with already functioning NR governance and management arrangements	Low
Gender inequality, lack of women participation, Risk of male takeover if women's economic activities increase in value and/or become more profitable	Gender-sensitive programming and inclusion of women in defining access to resources ensuring their rights	Medium

6. Coordination

Outline the institutional structure of the project including monitoring and evaluation coordination at the project level. Describe possible coordination with other relevant GEF-financed projects and other initiatives.

Coordination. The Federal Ministry of Agriculture and Forestry will be the Lead Project Agency. A Central Project Coordination Unit (CPCU) will be established in Singa, in the Sennar State, in the office premises already developed by the SUSTAIN project. The CPCU's geographical location in the centre of the overall project area will facilitate its leadership and oversight of implementation activities. The key staff in the CPCU will comprise the Project Director (PD), 2) Senior NRM Specialist as deputy PD and technical team leader of state-level technical staff, 3) Financial Controller, 4) M&E Specialist, 5) Knowledge Management and Communications Specialist 6) Procurement Specialist and 7) an Accountant.

SNRLP will establish nine State Project Coordination Units (SPCU) for implementing project activities in the nine states (Kassala, El Jazira, Gadaref, Khartoum; River Nile Sennar, North Kordofan, West Kordofan and South Kordofan). A State Coordinator (SC) with strong experience in NRM will head each SPCU and will be assisted by 1) Water Resource Management Officer 2) Rangeland Management Officer 3) Forest Management Officer 4) Rural and Agricultural Development Officer 5) Community Development and Gender Officer 6) M&E, Knowledge Management and Innovations Officer 7) Finance Officer 8) Procurement Officer and 9) an Accountant

SNRLP will also establish three Regional NRM Policy Coordination Centres (RPCC) one in Rufaa for the Butana region, one in Singa for the Sennar Region and one in El Obeid for the Kordofan region. The RPCCs will anchor the implementation of the policy, governance and regulations related activities the project. A Regional Policy Specialist will head each RPCC and will be assisted by State Policy Officers (5 in Butana, 3 in the Sennar - including officers responsible for Blue Nile and White Nile States, and 3 in Kordofan region).

The project areas will be divided into three sectors, namely Kordofan, Sennar and Butana to ensure effective and coherent implementation of project activities. A Sector Focal Point (SFP) will be designated in each sector for overall coordination and oversight of project activities in each sector. The North Kordofan SPCU in El Obied will function as SFP for the Kordofan sector. The Sennar SPCU in Singa will be the SFP for the Sennar sector and the Gezira SPCU in Rufaa will serve as the SFP for the Butana sector.

The LDCF related activities in SNLRP are fully blended in the programme to strengthen LDCF's additionality. The activities will be coordinated by the same coordination units as for SNLRP's and will report on specific LDCF activities and target.

Monitoring and Evaluation. An initial baseline assessment, conducted in the first few months after project start by a qualified service provider in a representative sample of communities within the targeted localities, will provide the reference data for later comparison and target measurement. At inception, the CPCU will review and update the Logical Framework during start-up workshops with the participation of representatives from all stakeholder groups, prepare the Overall Work Plan & Budget and the first Annual Work Plan & Budget (AWPB). Thereafter, the PMU will prepare each year a consolidated AWPB incorporating the State AWPBs generated by State Coordination Units and submit it in advance of the GoS annual budgeting process to ensure that sufficient counterpart funds are made available. On this basis, the M&E system will generate comprehensive and reliable information to support planning and decision-making for results-based management. The system will be participatory, decentralised, and compliant with IFAD requirements, and relevant data, analysis and reporting will be disaggregated by gender and age. The gathered data will inform the preparation of above mentioned AWPBs and annual progress reports, reporting on: i) Physical progress made in achieving the targets; ii) Financial progress; iii) Number of beneficiaries disaggregated by gender and socio-economic groups; iv) beneficiary assessment of the project activities; v) Failure and success stories; and vi) Constraints and problems from the previous year and how to address them.

For later impact measurement, interim post implementation evaluation studies will be carried out by a contracted independent body under the overall responsibility of the State cadres. A final impact evaluation will be commissioned from an independent service provider at the end of implementation.

Partnerships. With regard to the cooperation and synergies with other relevant GEF-funded projects the SNRLP will develop synergies with the Sudan Sustainable Natural resources Management Project (SSNRMP), financed by the GEF and implemented by the World Bank in the Butana and the Kordofan regions. In the Kordofan region the project will also seek cooperation with the future FAO project "Gums for Adaptation and Mitigation in Sudan (GAMS)", which is about to be submitted to the Green Climate Fund (GCF). FAO and UN Habitat has a rich experience in land tenure governance, conflict resolution and legalizing customary institutions in Darfur that the SNRLP can learn from. Finally, FAO and the World Bank are supporting the government in the development

of the REDD+ Strategy under which IFAD project beneficiaries, who has well established community forest management, could be supported in accessing carbon benefits financing. IFAD will also partner with ICRAF on mapping the agroecological zones and developing information support tools for decision makers, and will seek collaboration and coordination with the other relevant institutions active on environment and climate change issues, such UNEP.

7. Consistency with National Priorities

Is the Project consistent with the National Strategies and plans or reports and assessments under relevant conventions

Yes

If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc

- National Action Plan for Adaptation (NAPA) under LDCF/UNFCCC
- National Action Program (NAP) under UNCCD
- ASGM NAP (Artisanal and Small-scale Gold Mining) under Mercury
- Minamata Initial Assessment (MIA) under Minamata Convention
- National Biodiversity Strategies and Action Plan (NBSAP) under UNCBD
- National Communications (NC) under UNFCCC
- Technology Needs Assessment (TNA) under UNFCCC
- National Capacity Self-Assessment (NCSA) under UNCBD, UNFCCC, UNCCD
- National Implementation Plan (NIP) under POPs
- Poverty Reduction Strategy Paper (PRSP)
- National Portfolio Formulation Exercise (NPFE) under GEFSEC
- Biennial Update Report (BUR) under UNFCCC

The proposed project is in line with Sudan's National Agriculture Investment Plan (SDNAIP 2016-2020) which is a five-year investment plan which maps the investments needed to achieve the Sudan Comprehensive Africa Agriculture Development Project (CAADP). Among other objectives the SUDNAIP is expected to boost food production (SDG 2), address food and nutritional insecurity and agricultural entrepreneurship (SDG 8), and enhance sustainable land and water management practices to address climate change (SDG 13). The SDNAIP was prepared on the basis of the Five - Year Programme for Economic Reform (2015-2019). In this framework the proposed project will be aligned with the Agricultural Revival Programme and the Integrated Solutions to Agricultural Sector Programme which are currently being implemented at the national level.

The proposed LDCF project is also closely in line with recommendations of the NAPA prepared in 2007. It targets the most vulnerable groups to climate risks identified by the NAPA, the traditional farmers depending on rainfed agriculture and pastoralists. The proposed project responds to key recommendations of the NAPA for adaptation activities in agriculture and water resource management, mainly: Promote awareness of climate change and its potential impacts within government ministries, in schools and universities, and at the local community level, and; Continue to build and strengthen human capacity (training) indigenous knowledge. The proposed project is aligned with the First National Communication to UNFCCC (2003), the Second National Communication (2012) and is fully consistent with the two objectives of the National Adaptation Plan (NAP, 2016), which aim to: 1) Reduce vulnerability to the impacts of climate change by building adaptive capacity and resilience among state- and national-level institutions; and 2) Promote the integration of climate change adaptation perspectives into existing and new policies, programmes and activities. The Intended Nationally Determined Contribution (INDC, 2015) entails intended contributions around cross-cutting issues that the proposed project will contribute to, such as: Strengthening institutional capacity at the state and federal level; Implementation of adaptation initiatives; Implementation of adaptation programmes and projects in the most vulnerable sectors and states as identified in the NAP; and: Increasing public awareness

There are synergies between the UNFCCC and the two other Rio Conventions, the UNCCD and the CBD, on issues related to sustainable land management, including food security, climate change adaptation and land degradation. These synergies will also be harnessed by this project and contribute to the achievement of the Sustainable Development Goals, including those related to poverty (SDG 1), hunger (SDG 2), water (SDG 6), energy (SDG 7), economic

growth (SDG 8), climate action (SDG 13), and life on land (SDG 15).

8. Knowledge Management

Outline the Knowledge management approach for the Project, including, if any, plans for the Project to learn from other relevant Projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

The overall purpose of KM is to enable the country programme to build a credible knowledge base of practical and actionable know-how that can be used to better address challenges related to the community governance of natural resources in Sudan.

Community Management teams will play a crucial role in liaising with Village Development Clusters to identify lessons learned and best practices from the field, collected in the form of stories from the field and/or cases studies with a specific focus on women, youth and pastoralists. Such an analysis will be carried out by promoting broad consultation process aimed to identify and address knowledge and capacity priorities, needs, gaps and solutions. On the basis of this information, ad hoc information materials and training for target groups based on needs assessments will be produced always counting on the support of the State Implementation Units (SCUs) M&E, KM and Innovation officer. The latter will transmit to the state level (Programme Implementation Unit) the lessons learned and best practices collected at the field level and will have to identify those experiences or innovations that can be potentially useful to broader audiences and use it as inputs for the preparation of Knowledge Products (KPs). The PCU M&E, KM and Innovation Officer will arrange and prepare these products for a wider sharing among all the stakeholders of current IFAD funded interventions in Sudan.

More specifically, the project's overall learning and knowledge management strategy will capture and disseminate knowledge at various levels and will focus on the following priorities: i) generating trust and fostering linkages between partners; ii) managing and sharing information, knowledge and experiences; iii) improving the effectiveness and efficiency of the private sector in adding value and innovating; iv) conducting analysis that can provide the evidence base for policy dialogue and reform; and v) creating conditions for replication, upscaling and sustainability. The project will benefit from the experience of previous IFAD projects in Sudan and in the region by identifying, analyzing, and sharing lessons learned and promoting learning tools that might be beneficial for the different stakeholders, such as “the learning routes”. The LDCF will particularly support the capitalization, valorization and dissemination of indigenous knowledge to address climatic stress. Results from the project will be disseminated within and beyond the project intervention zone through a number of existing information sharing networks and forums.

9. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification*

PIF	CEO Endorsement/Approval	MTR	TE

Measures to address identified risks and impacts

Provide preliminary information on the types and levels of risk classifications/ratings of any identified environmental and social risks and potential impacts associated with the project (considering the GEF ESS Minimum Standards) and describe measures to address these risks during the project design.

Supporting Documents

Upload available ESS supporting documents.

Title

Submitted

Part III: Approval/Endorsement By GEF Operational Focal Point(S) And Gef Agency(ies)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the Operational Focal Point endorsement letter with this template).

Name	Position	Ministry	Date
Noureldin Ahmed Abdalla	Secretary General	HIGHER COUNCIL FOR ENVIRONMENT AND NATURAL RESOURCES	11/18/2018
Project Map			12/3/2019
GEF 7 LDCF Results framework			1/27/2020
Word version of the PIF			3/6/2020

ANNEX A: Project Map and Geographic Coordinates

Please provide geo-referenced information and map where the project intervention takes place

