



Resilience of Pastoral and Farming Communities to Climate Change in North Darfur

Part I: Project Information

GEF ID

10159

Project Type

FSP

Type of Trust Fund

LDCF

CBIT/NGI

☐ CBIT

☐ NGI

Project Title

Resilience of Pastoral and Farming Communities to Climate Change in North Darfur

Countries

Sudan

Agency(ies)

FAO

Other Executing Partner(s)

Executing Partner Type

Other Executing Partner(s)

Higher Council of Environment and Natural Resources (HCENR) and, North Darfur State Ministry of Production and Economic Resources.

Executing Partner Type

Government

GEF Focal Area

Climate Change

Taxonomy

Focal Areas, Climate Change, Climate Change Adaptation, Livelihoods, Least Developed Countries, Innovation, Climate resilience, Community-based adaptation, Influencing models, Demonstrate innovative approach, Stakeholders, Beneficiaries, Local Communities, Communications, Behavior change, Private Sector, Individuals/Entrepreneurs, SMEs, Type of Engagement, Participation, Gender Equality, Gender Mainstreaming, Gender-sensitive indicators, Gender results areas, Capacity Development, Access and control over natural resources, Participation and leadership, Capacity, Knowledge and Research

Rio Markers**Climate Change Mitigation**

Climate Change Mitigation 0

Climate Change Adaptation

Climate Change Adaptation 2

Duration

48 In Months

Agency Fee(\$)

230,820

Submission Date

4/1/2019

A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
CCA-1	LDCF	1,600,000	9,500,000
CCA-2	LDCF	829,680	500,000
Total Project Cost (\$)		2,429,680	10,000,000

B. Indicative Project description summary

Project Objective

To reduce the vulnerability of pastoral and farming communities to climate change along the migratory routes in North Darfur and improve their social protection, food security and nutritional status. Indicator: Number of vulnerable agro-pastoralists with increased resilience through innovation for climate change adaptation Target: 25,000 women and 25,000 men

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
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Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
1. Participatory land and resource use planning strategically addresses climate change adaptation and mitigates resource-based conflicts	Technical Assistance	<p>Private sector agriculture and livestock producers cooperatively and effectively managing shared resources to address climate change impacts and build system resilience</p> <p>Indicators:</p> <p>(i) Twenty villages adopt and implement cooperative resource management framework without conflict;</p> <p>(ii) 6,000 hectares of degraded agricultural and grazing lands managed under a climate resilient land use management plan.</p>	<p>1.1 Participatory climate response conflict resolution and decision-making structures in place.</p> <p>1.2. Strategic sustainable land use management framework operational to support private sector adaptation and resilience.</p>	LDC F	713,981	580,000

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
2. Pastoralists and farmers adopt sustainable, climate resilient practices and livelihoods	Investment	<p>North Darfur communities adopt and implement climate resilient agriculture and livestock management approaches</p> <p>Indicators:</p> <p>(i) Number of livestock and agricultural producers engaging in APFS programming;</p> <p>(ii) Number of APFS participants reporting improved levels of economic, environmental, and social well-being;</p> <p>(iii) Number of livestock and agricultural producers adopting project identified climate resilient production methods.</p> <p>Note: relevant impact indicators will be disaggregated by gender.</p>	<p>2.1 Concrete investments identified and implemented to strengthen the resilience of private producers (i.e. individual entrepreneurs, which are generally family farmers, pastoralists and agro-pastoralists, and MSMEs).</p> <p>2.2 Agro-pastoral Field Schools support application of climate resilient production practices</p>	LDC F	1,250,000	8,420,000

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
3: Lessons learnt captured, mainstreamed and upscaled	Technical Assistance	<p>Best climate resilient and adaptive practices are mainstreamed and being applied at local, regional, and national levels.</p> <p>Indicators: (i) Number of national policies and plans integrating best practices resulting from project implementation; (ii) Number of Government extension officers and other service providers utilizing project developed practices outside the immediate project target area; (iii) Number of stakeholders actively engaged and utilizing project communication and visibility products.</p> <p>Note: relevant impact indicators will be disaggregated by gender.</p>	<p>3.1 Results strengthen national level resilience and adaptation policies</p> <p>3.2 Project lessons captured and disseminated.</p> <p>3.3 Effective Monitoring and Evaluation Implemented.</p>	LDC F	350,000	500,000

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
				Sub Total (\$)	2,313,981	9,500,000
Project Management Cost (PMC)						
				LDCF	115,699	500,000
				Sub Total(\$)	115,699	500,000
				Total Project Cost(\$)	2,429,680	10,000,000

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(\$)
Government	Higher Council for Environment and Natural Resources	In-kind	Recurrent expenditures	1,000,000
GEF Agency	FAO	Grant	Investment mobilized	8,000,000
Donor Agency	European Development Fund	Grant	Investment mobilized	1,000,000
			Total Project Cost(\$)	10,000,000

Describe how any "Investment Mobilized" was identified

New and additional investments from development partners, executed in the same geography and during the same period of time, have been mapped and relevant projects and programmes capitalised and recognised as mobilised investment.

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(\$)
FAO	LDCF	Sudan	Climate Change	NA	2,429,680	230,820	2,660,500
Total GEF Resources(\$)					2,429,680	230,820	2,660,500

E. Project Preparation Grant (PPG)

PPG Amount (\$)

100,000

PPG Agency Fee (\$)

9,500

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
FAO	LDCF	Sudan	Climate Change	NA	100,000	9,500	109,500
Total Project Costs(\$)					100,000	9,500	109,500

Core Indicators

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	25,000			

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Male	25,000			
Total	50000	0	0	0

Part II. Project Justification

1a. Project Description

1a. PROJECT DESCRIPTION

Background:

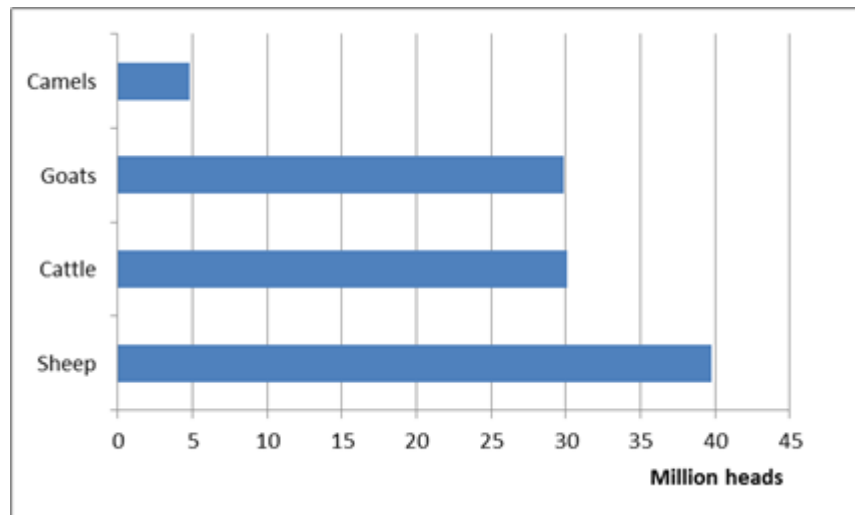
Sudan lies between latitudes 10°N and 23° N and longitudes 21°45'E and 38°30'E and borders South Sudan, the Red Sea and six other African nations. The total land area is approximately 1.9 million km². The majority of the land is defined by arid plains interspersed by hills and mountains. Outside of the Nile basin, water resources are very limited, drought is common, and soil fertility is low.

The total population is estimated at 38 million. According to the World Bank^[1], Sudan has a large poverty incidence (estimates set the average rate of poverty incidence at 46.5%) and great inequality between regions. Gender-based disparities are substantial and human development indicators remain low. Sudan ranked at 166 out of 187 countries in 2014. The latest Integrated Food Security Phase Classification (IPC) estimates that 3.9 million people in Sudan are classified as “food insecure” and in “crisis” or “emergency” phases. The main causes of the poverty in Sudan include: the multiple and sustained conflicts; a past dependence on oil; the unequal distribution of fiscal resources; and, unequal access to natural resources.

Livestock raising and livestock production have and continue to play a central role in the Sudanese economy and culture. The livestock sector has consistently provided more than 60% of the estimated value added of agriculture to the Sudanese economy and is a substantially more important to the national agricultural GDP than crop farming.^[2] Livestock is by value the largest subsector of Sudan's domestic economy. This was the case even prior to secession from South Sudan when agriculture contributed more to the national GDP than petroleum and livestock represented the largest percentage of agriculture. Although statistics on livestock and its contribution to the economy are incomplete and

unreliable, official figures (quoted in Behnke, 2012) show significant growth of cattle population from about 16 million to over 40 million heads between 1975 and 2010. Similar increases exist for sheep, goat and camels.

FAO estimates for livestock population in 2013^[3]



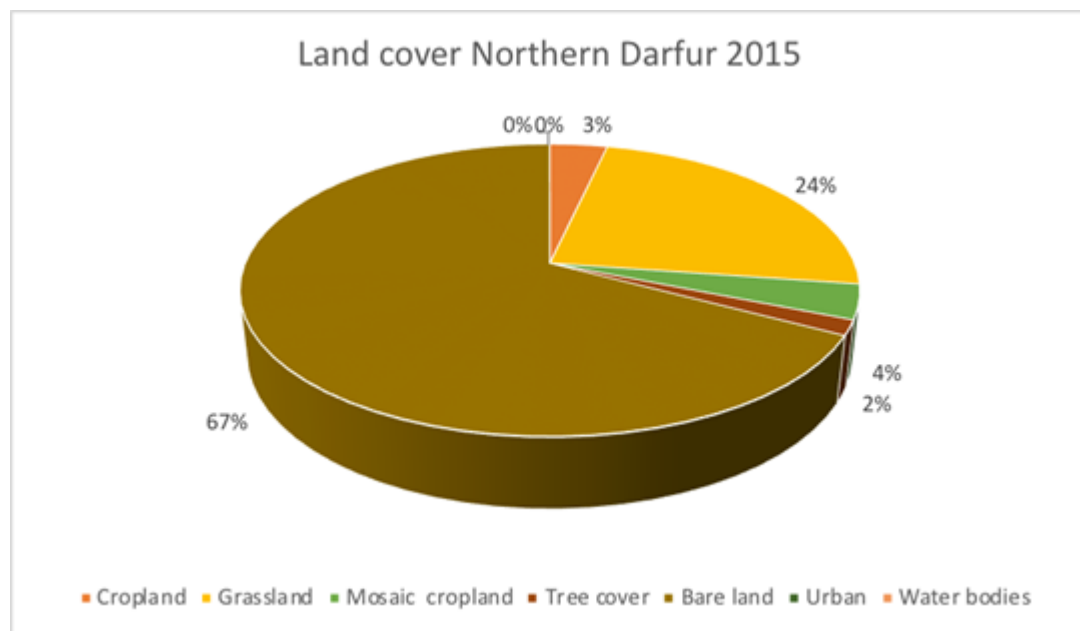
The vast majority of livestock production – possibly 90% of the total, although the actual figure is not known – is from smallholders and migratory producers. The combination of mobile and sedentary pastoral and agro-pastoral production by farming and herding households is an important pillar of the Sudanese economy. In the transhumant systems, women are typically responsible for managing and processing small stock and other animals kept near the homestead such as poultry, calves and small ruminants, and for sick animals. Both women and men in The Sudan can sometimes have major herding and management responsibilities for large stock. In the agro-pastoral system, women generally manage and control the animals that remain near the homestead, including cattle production and sheep fattening, while men herd the other animals.

Although previously neglected, Sudan now recognizes the need for greater attention to agriculture and livestock. This is reflected in the Interim Poverty Reduction Strategy Paper (I-PRSP) and the Five-year Program for Economic Reforms.

Project Area:

The Darfur Region lies to the west of Sudan and borders with South Sudan, Chad and Libya. The total population is currently estimated at approximately 8.1 million^[1], a dramatic increase from approximately 1 million in 1954. The total Darfur Region covers approximately 514,000 km². The Darfur Region consists of five States: North Darfur, Central Darfur, Eastern Darfur, Western Darfur and Southern Darfur. The economy is based upon farming and livestock keeping. More than 70 percent of the population relies on traditional and subsistence agriculture, mostly rainfed agriculture and pastures. Darfur is arid and semi-arid with few permanent water sources and small areas with good pasture seasonally dispersed.

The North Darfur covers an area as big as 317,614 km², and approximately 2,514,000 people live there. It has some of Sudan's most marginalized communities. The vast majority of Darfur residents are highly vulnerable farmers and pastoralists. Most depend upon livestock for subsistence. The Project will intervene along the traditional herder migration routes in North Darfur. This will cover the areas that lie to the north and northwestern parts of North Darfur state, mainly North Mellit, Sayah, North Kutum, North Kebkabyia, Umbaru, Saraf Omra, Elserief, Kuma, North Umkaddada, and Malha.



Source: Extracted and recategorised from CCI-LC maps at 300m spatial resolution, 2015 (WGS84)

Resource-user groups in Darfur can generally be categorized into three main groups: pastoralists, agro-pastoralists, and sedentary farmers.

- Pastoralists once depended primarily on livestock and mobile pastoralism, both within and beyond Darfur. Recent changes and the conflict have increasingly restricted their mobility, often to within the State border and to restricted locations within the State. As a response, many have resorted to other livelihood strategies including crop husbandry, sale of firewood, building material, fodder and forage and crop cultivation depending on the areas. Many became less mobile or sedentary. This group covers a wide range including semi-nomadic camel herders and settled baggara.

· Agropastoralism is a livelihood strategy used by both pastoralists and sedentary farmers to improve livelihoods and increase food security through better management of risks. The main livelihood strategy is diversification through a combination of: (i) rainfed cultivation; (ii) livestock rearing; (iii) labour migration and remittances to families for household needs; (iv) collection and selling of charcoal, firewood, grass, local construction materials; and (v) collection of wild foods for household consumption.

· Sedentary farming groups typically base their livelihood strategies on: (i) crop cultivation; (ii) livestock raising for consumption and sale; (iii) fruit cultivation; (iv) cultivation and sale of fodder, grass or tobacco; and (v) small enterprise, including pot and brick making, carpentry, handicrafts and blacksmithing.

Threats, Causes and Climate Related Issues:

In this highly resource-scarce setting, the ability of people and livestock to move freely was governed by informal but structured institutions. For centuries, this traditional system underpinned livelihood security and managed conflicts between and within livelihood groups.

Historically, the migration routes extended throughout the entire Darfur region and many continued into Chad and what is now South Sudan. To some extent the conflicts in the late 20th century were fuelled by disputes over access to land and water. Pre-conflict, there were eleven fixed seasonal stock routes in Greater Darfur with a total length of 4,860 kilometres. Traditionally, the herder communities spend the short rainy season in these areas in North Darfur. Historically, customary management arrangements ensured that the level of inter-community conflicts was low and any conflicts were highly localised. In general the sedentary, agro-pastoralist and pastoralist communities co-existed.

These communities endured years of conflict. The end of the 20th Century witnessed great instability and costly civil conflict in Darfur. According to many experts, although this conflict had some roots dating back several centuries, it was more directly caused by a series of aggravated factors. These included: increasing population pressure, a changing climate, a degraded natural resource base and limited capacities. Apart from the very high cost in human lives, the conflict led to very high numbers of internally displaced persons (IDPs) and it devastated the social structure and economy in Darfur. It has also contributed to the further degradation of the natural resource base.

This in part resulted in altered resource management practices that simply exacerbated natural resource degradation. This tenuous situation will now be combined with imminent climate change challenges. Climate change's impacts such as increased temperatures, more erratic rainfall patterns, and a dramatic decrease in seasonal rains will potentially have

severe repercussions for Darfur's agriculture and livestock dependent communities. The additional stress caused by climate change will be potentially catastrophic for Darfur's communities if tangible improvements are not made quickly.

Water is the principal limiting factor for all socio-economic activities in Darfur due to scarce rainfall, high rainfall variability, and high evaporation rates. Darfur's climate is principally arid and semi-arid with annual rainfall ranging from under 100 mm in the very North to possibly 500 mm in the very South. Darfur's rainfall is notably highly variable in both geographical and temporal terms. For El Fashr, there is a great inter-annual variability in both total annual rainfall and number of rainy days during the period 1917-1986.^[1] Complete recent data is not available. However, available data suggests that average rainfall has declined sharply over the past century. For example, the 200mm isohyet moved South across most of North Darfur between 1940-70 and 1977-86.

A recent climate assessment by IFAD discusses how climate change will likely challenge resources users in North Darfur over the coming decades.^[2] Average temperatures will increase across the region at least 2 degrees centigrade with West Kordofan and South Darfur facing possibly higher increases. Seasonal temperatures will also increase. The Red Sea, River Nile, Northern and North Darfur States will see anticipated highest seasonal variability with increases projected to be greater than 2.5 degrees Celsius.

Over the coming years, most states will have more annual rainfall while others will have less. However, rain periods will become less reliable with the rainy season likely becoming more dry overall. The states predicted to have the most seasonal variability are the Red Sea, River Nile, Northern, and North Darfur. The precipitation changes in North Darfur are predicted to be dramatic with the wet season precipitation likely decreasing by 9%.

Governance changes and conflicts have greatly altered the migratory routes. On the whole, pastoralists can no longer leave North Darfur State. Further, within North Darfur, many of the previous grazing lands are inaccessible. At the same time, the conflict resulted in the loss of critical infrastructure. Much of the water harvesting and storage infrastructure upon which communities depended was destroyed, causing an even greater strain and further concentrating impacts on limited resources.

The Darfur population is also increasing. An increasing number of households now concentrate their productive activities into smaller areas. This creates a very competitive landscape for limited resource access. Pastoralists arrive earlier in the rainy season and increasingly encroach on crop land. Sedentary farmers increasingly adopt livestock as a risk management mechanism and extend their cropping areas. The agro-pastoralists hold higher numbers of livestock, requiring more resources while they continue to extend their cropping areas to feed their growing households.

Climate change and accompanying weather variability and drought are further contributing to ecosystem degradation and resource shortages. Meanwhile, communities continue to adopt and proceed with maladaptation practices. This includes over-stocking beyond resource capacity limits, expanding cropping onto unsuitable soils, allowing livestock to graze on cropping land before crops are harvested, and over-extraction of water resources.

Climate change is exacerbating an already difficult social and environmental situation. This is resulting in increased levels of desperation and competition for limited and degraded resources. Conflict between the three production groups (pastoralists, sedentary farmers, and agro-pastoralist) is already occurring. There is a very real and imminent danger that conflict will escalate.

The areas with most degradation and most prone to conflict are concentrated along pastoralist migratory routes that will be targeted by the project. These are the locations where the three agriculture/livestock production methods collide most frequently, compete for limited resources, and generate the highest levels of climate change vulnerabilities.

During the preparation of this PIF, a consultation workshop with stakeholder communities in the targeted areas identified a complex set of inter-related threats. Stakeholders clearly and easily identified challenges attributable to climate change impacts. This included rainfall inconsistencies and resulting lack of water resources and pastures. They noted that climate changes and environmental degradation combine to reduce animal fitness and increase the prevalence of animal diseases. Stakeholders detailed resource insecurities and associated societal stresses. They spoke of deteriorating vegetation cover and the advancement of desertification. The stakeholders agreed that resource competition was leading to increasing levels of conflicts. The stakeholders noted that many of these issues stem from restricted pastoralist mobility. The findings from the PIF consultation workshop are fully in line with recent assessments led by multi-sectoral science-based assessment teams[\[3\]](#).

Barriers

Three barriers have been identified:

Barrier One: Limited capacity to strategically address climate change impacts and reduce conflicts

Under the existing situation, the government stakeholders and private producers (pastoralists, agropastoralists, and sedentary farmers) have very limited capacity and experience with the application of tools required to address climate change impacts and avoid conflicts. Extension officers and other government service providers do not have exposure or experience with the requirements for generating assessments, strategically implementing programs, and/or working with local communities to reduce conflicts focused upon climate change issues. This is particularly the case in regions where resource stress compounded by climate change generate heightened risks.

Barrier Two: Limited experience and knowledge regarding identification and implementation of innovative practices and adapted solutions to address climate-related challenges

Vulnerable private producers (pastoralists, agropastoralists, and sedentary farmers) are in desperate need to gain exposure and knowledge of best best practices and innovations that can be applied to address current climate change related challenges. This includes knowledge and exposure to solutions to climate change problems as well as organizing the delivery of capacity required to move these solutions forward. Most problematic is that there is a lack of and limited access to financing required to model these practices.

Barrier Three: Limited ability to capture, mainstream and upscale best practices

The current management system in North Darfur is not designed to capture, mainstream and upscale best practices. There are numerous government policies moving forward that should incorporate and reflect improved practices to drive climate change resilient and adaptive practices. However, the current system does not do a very good job of identifying challenges and/or capturing best practices due to capacity constraints. There is also a need to harmonize regulatory and policy approaches to make certain best practices are mainstreamed. There is a need to assist the North Darfur with the ability to move forward with this required additionality.

1.2 The Baseline Scenario

Under the baseline scenario Government and private stakeholders recognize the need to address climate change challenges and related impacts such as resource-based conflicts. The existing policy and institutional framework, although weak and in need of strengthening, is capable of providing supporting for project implementation. A number of institutions are in place with dedicated staffs, including extension services. However, the existing baseline does not benefit from the capacity required to identify and implement solutions required to address existing and emerging climate change challenges. This includes the need to improve exposure to and experience with the application of successfully proven management and production approaches.

Institutional Framework

Sudan consists of 18 States. Governance is highly decentralised. Each state government has significant autonomy over legislation, budget execution, development programming and service delivery. There are a number of smaller investments by both national and state governments aimed at improving resiliency and adaptation for Darfur's livestock and agriculture sector. Examples include genetic improvement programmes for cattle and a seed distribution programme. Government initiatives are under-funded and insufficient to make a significant impact.

The existing extension services include many knowledgeable practitioners and experts in the State government line ministries and in the State level stations of the technical institutes (ARC, FNC). However, existing extension services are not very operational and lack recent grass-roots experience. Moreover, given the recent security situation, they have developed a more theoretical rather than a 'hands-on' approach. Activities and linkages will be more fully elucidated during the PPG phase.

- Federal Ministries of Agriculture and Forests, Water Resources and Irrigation, and Animal Resources: all have small ongoing national programmes with some activities in Darfur such as water harvesting, tree seedling production, plantation of trees/shelterbelts, distribution of crop seeds, animal vaccination.
- State Ministry of Production and Economic Resources provides support to vulnerable communities, it provides some agriculture and livestock extension services, and it is implementing the Drought and Desertification Control Project.
- Higher Council for Environment and Natural Resources provides support to the NAP technical committee in the state as well as coordination with relevant institutions at state and federal levels.

Policy Framework

The existing policy framework provides the basic support required to implement project activities. However, this framework will require strengthening in order to support major resilience improvements. Under the baseline, the following national regulations are in place:

- The Gum Arabic Act (2009) liberalized trade and has had a major impact on improving production and benefits to smallholder farmers.
- The Seed Act (2010) ensures plant breeders' rights and provide sound regulation of the seed production chain.
- The Agricultural and Livestock Professional Organization Act (2011) established the legal basis for new autonomous producers' organizations.
- The Range Organization and Development of Fodder Resources Act (2015) provides a list of definitions, for example of range land, reserves, fire lines, fodder, agricultural residue, livestock, cultivated rangeland, range protection, etc. The Act is broad, for example covering: the establishment of reserved rangeland; rangeland management; responsibilities of the Range Administration; rangeland protection and delineation of cattle routes; prohibited practices on rangelands, etc.

Projects and Programs

The following development partner projects and programmes constitute the baseline for the LDCF project. Each project will provide evidence, lessons, tools and approaches to inform LDCF project implementation. Several of these projects will contribute to the co-financing of the LDCF project. However, the challenges are far greater than the current scope of investment and continue to persist.

A number of projects are working towards increasing food security. A handful of efforts have been launched to address the conflicts between pastoral and sedentary producers. Some projects are showing initial success with the application of VGGT. Others are underway designed to strengthen the capacity of land commissions. There are projects working to increase the capacity of weather forecasting to build early warning enhancements.

Under the baseline, current investments do not cohesively apply innovative tools such as VGGT and APFS to address the fundamental issues and linkages between land use management, production practices, and strategic decision-making frameworks required to comprehensively alleviate conflicts between pastoralist and sedentary agriculturalists. This is a niche where the LDCF investment will provide critical additionality.

Baseline Project	Baseline Project Details	Complementarity as LDCF Baseline
Recovery of Livelihoods of Vulnerable Pastoralist and Agro pastoralist Households in the Darfur Region.	<p>Financier: Qatar</p> <p>Amount (USD): 4,881,188</p> <p>Implementing agency: Implemented jointly by FAO, ILO and UNOPS.</p> <p>Duration: 2016 –2019</p> <p>Geographical coverage: Darfur States</p>	<p>The overall project objective was to improve food and nutrition security for conflict-affected farmers and nomads by supporting their agriculture and livestock-based livelihoods. Enhanced access to sustainable water resources, certified seeds, veterinary and livestock services and agribusiness skills, and promotion of community natural resources management systems have been promoted, and will feed into the LDCF project.</p> <p>This project supports conflict-affected communities to adopt sustainable crops and livestock production practices. The project supports some villages along the livestock migratory routes to adopt climate resilient agricultural practices.</p> <p>The LDCF project will build upon the results and lessons from this concluded project, and mainstream climate resiliency in a participatory manner. The project is not considered a co-financing source for the LDCF project.</p>

<p>Assessment and Technical Support to Darfur Land Commission and Addressing Land Concern at Return Sites.</p>	<p>Financier: Qatar</p> <p>Amount (USD): 6,079,290</p> <p>Implementing agency: Implemented jointly by FAO, UNDP, UN-Habitat, UN-Women</p> <p>Duration: 2016 –2019</p> <p>Geographical coverage: Darfur States</p>	<p>The overall project objective is to strengthen the capacity of the Darfur Land Commission and its partners at state and local levels to formulate a land rights disputes mechanism, making recommendations to the competent authorities on necessary changes to people-centred land reform policies and legislation, including the restoration of land rights to their owners. In addition, this Project also aims to address land concerns at return sites following traditional practices through participatory planning.</p> <p>This project has a component related to collection of background information on current and historical nomadic corridors, carry out comprehensive conflict mapping along the proposed corridors, and establishment and testing a monitoring system for migratory routes. This component complements the LDCF project. Information generated by the project will be used by the LDCF project to mainstream climate variability and climate resilience into participatory decision-making along the migratory routes through activities such as strategic planning. The project is not considered a co-financing source for the LDCF project.</p>
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<p>Promoting the provision of legitimate land tenure rights using VGGT for conflict-displaced communities, including small-scale rural farmers, pastoralists, and IDPs in the Greater Darfur region of Sudan.</p>	<p>Financier: European Commission</p> <p>Amount (USD): 3,401,360</p> <p>Implementing agency: Implemented by FAO.</p> <p>Duration: 2016 –2019</p> <p>Geographical coverage: Darfur States</p>	<p>The overall project objective is to increase inclusive and transparent management of fragile land resources in line with the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests (VGGT) guidelines on Land Tenure.</p> <p>The project will facilitate reform of the Sudan’s land tenure system by providing practical solutions to the existing challenges of access to land and ownership rights for natural resources through VGGT guidelines.</p> <p>The project will provide solutions to secure access to crop land, livestock routes, rangelands and pasture, including the provision of adequate and practical dispute resolution mechanisms.</p> <p>This project support reduced land resource competition and building consensus on its uses and management using tools such as mapping community resources and developing community action plans for natural resources management. These outputs complement the LDCF project, which will strengthen the decision-making structure in targeted communities, and ensure mainstreaming climate change adaptation in community action plans in participatory manner. Due to timing, it is not considered co-financing though.</p>
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<p>Strengthen the Sudan Meteorological Authority's hydro-meteorological network and climate services</p>	<p>Financier: Ministry for the Environment, Land and Sea of Italy</p> <p>Amount (USD): 580,000</p> <p>Implementing agency: FAO</p> <p>Duration: 2019- 2020</p> <p>Geographical coverage: Country</p>	<p>The project introduces, within the meteorological and forecast centres, modern computer models to produce seasonal weather forecasts and climate predictions. It helps foster cooperation in the field of climate change vulnerability, risk assessment, adaptation and mitigation.</p> <p>The main goal of the project is to strengthen the Sudan Meteorological Authority's hydro-meteorological network and climate services with the following specific objectives:</p> <ul style="list-style-type: none"> • Training of technical staff of SMA on advanced use of WRF including the use of data assimilation techniques and validation of the weather forecasting system. • Training of technical staff of SMA on the use of RegCM4 for long-term climate projection, including the setup of a suitable model configuration for the area of interest. • Support the enhancement of computational resources for weather and seasonal forecasting and climate projections. • Support the rehabilitation and expansion of the ground based observational network. <p>Strengthened hydro-meteorological and climate services undoubtedly benefit improved resilience efforts, and therefore the project is capitalized as co-financing.</p>
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Livestock Marketing and Resilience Programme.	<p>Financier: IFAD, ASAP, GEF-LDCF, GOS</p> <p>Amount (USD): 119,200,000</p> <p>Duration: 2015 – 2021</p> <p>Geographical coverage: National for livestock value chains and policy aspects of livestock sector development and natural resource management in the context of climate change.</p> <p>Localities in the five States of West Kordofan, North Kordofan, White Nile, Sennar and Blue Nile for direct community-level interventions</p>	<p>The overall project objective is to increase food security, incomes and climate resilience for poor households in pastoralist communities.</p> <p>The programme aims at increased incomes from improved livestock productivity, new enterprises in livestock, agriculture and diversified economic activities; enhanced productive natural resource assets; improved resilience of poor rural communities to future climate variability and/or financial shocks; and increased net trade surplus in hides and skins, red meat, live animals and related products.</p> <p>Although the project does not target the Darfur, at the national level the Programme will support the Animal Production Research Corporation to undertake applied livestock research in the field of enrichment and densification of crop residue, feed types, readymade feed, local produced feed mix, and feed supplements across different breed/cross-breeds of animals and age groups. Lessons learned from the Programme will be captured and contribute to the LDCF project. Additionally, the research results on animal feeding practices would complement the LDCF project.</p> <p>The Programme targeted states are characterized by high frequency and intensity of conflicts between transhumant livestock producers and sedentary farmers over land and water, as well as vulnerability to climate change, therefore, lessons learned and developed livestock, crops and NRM practices are complementing the LDCF outcomes. Additionally, the value chain approach and the market information system. The project is not considered a co-financing source for the LDCF project.</p>
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<p>Draught Resilient and Sustainable Livelihoods Programme in the Horn of Africa.</p>	<p>Financier: ADB, GEF, GOS</p> <p>Amount (USD): 32,000,000</p> <p>Geographical coverage: Kassala, Gedarif and White Nile States</p>	<p>The overall programme objective is to contribute to poverty reduction, food security and accelerated sustainable economic growth through enhanced rural incomes. The project aims to enhance drought resilience and improve sustainable livelihoods of pastoral and agro-pastoral populations.</p> <p>The Programme supports Water development for livestock, crop production and human consumption;</p> <p>Rangelands management; Securing access to natural resources; Livestock production and health; Food and feed production; and Livelihood diversification. Sustainable practices and lessons learned from these areas will potentially provide inputs to proposed Darfur activities. The project is not considered a co-financing source for the LDCF project.</p>
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Wadi El Ku Catchment Management Project – Phase II	<p>Financier: European Development Fund</p> <p>Amount: Euro 2,000,000</p> <p>Implementing agency: UNEnvironment</p> <p>Duration: 2018 - 2021</p> <p>Geographic coverage: North Darfur</p>	<p>The first phase of the project contributed to improving livelihoods of conflict-affected populations in Darfur through the sustainable use of natural resources. This meant increasing all aspects of agricultural sector productivity in targeted areas of Wadi El Ku in North Darfur, through rehabilitation and improved management of natural resources, in particular land, vegetation and water. In the second phase, the project continues to demonstrate how effective and inclusive natural resource management can improve relationships over natural resources, therefore contributing to peace in a conflict affected region of Sudan, and improve livelihoods through enabling sustainable increases in agriculture and related value chain productivity. Participating communities will achieve sustainable increases in agricultural and related value-chain production through the rehabilitation and improved management of land, forest and water resources.</p> <p>This investment is therefore directly co-financing the livelihood diversification efforts under component 2 of the project, for an estimated amount of USD 1,000,000.</p>
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Building Food system Resilience in Protracted Crises

Financier: Dutch Development Cooperation

Amount (USD): 27,303,750

Implementing Agency: FAO

Duration: 2019 - 2023

This global project aims to improve food and nutrition security and capacity of households, within their livelihoods, to withstand and adapt to shocks.

The project will bring humanitarian, development and peace actors together to break the vicious cycle of hunger and conflict in ways that address root causes of persistent vulnerabilities causing hunger and malnutrition. The initiative addresses both causes and consequences of food and nutrition insecurity in a conflict sensitive way. The resilience initiative will help to formulate a complementary framework that bridges humanitarian and development objectives through resilience building (breaking through strictly humanitarian or development interventions).

In Sudan, the target area of the project is the gum belt. Gum arabic benefits an estimated 5 million Sudanese people. It provides an income diversification strategy to mitigate crop failure. Farmers usually invest income from gums into production of field crops and livestock fattening, so increasing the gum producer price can have important multiplier effects on crop and livestock production. Gum Arabic provides protection to farmers and strengthens their resilience to absorb shocks from low production in bad rainfall seasons. In addition, it is utilized locally for fuel, forage, timber, medicine, handicraft, domestic utensils, building material, soil fertility, shade and shelter, amenity and other agro-forestry practices.

Essentially, the project's proposed activities centred on the gum arabic value chain will increase the resilience of communities and their food security status by:

- Diversifying livelihoods and increasing farmer incomes, through improving technical, organizational and commercial capacity to produce and market gum arabic;
- Supporting landscape restoration and reduce degradation, building back the green belt in Darfur;
- Reducing conflict between crop and livestock producers, through rehabilitating livestock corridors and increasing fodder availability, among others, and;
- Increasing the share in the benefits of the gum arabic production for women, e.g. through the support of existing and creation of new dedicated women's producer groups.

All of these activities are complementary to the LDCF project outcomes, and the project will provide co-financing to components 1 and 2 of the LDCF project to

1.3 The Alternative Scenario

The Darfur area is defined by extremely poor and vulnerable communities that rely upon agriculture and livestock production for their survival. Existing resource management is wholly unsustainable and already results in degradation, climate change vulnerability and conflict over diminishing resources. Future climate change and accompanying impacts resulting from temperature increases, weather variability, and water shortages will exacerbate this already tenuous situation. Communities located along the traditional pastoralist migratory routes where the three agriculture/livestock production communities come into conflict are particularly vulnerable.

The Government and communities recognize the challenges and are fully willing to engage in the promotion and implementation of improved scenarios. However, they are ill-equipped to emplace the improvements required in order to reduce vulnerabilities and insulate already at-risk communities from inevitable climate change impacts.

With financial support from LDCF to cover additionality, the proposed alternative will address this situation by assisting communities to identify and adopt necessary management improvements. The alternative will set in place two innovative and complementary tools that FAO and its partners have developed extensively in recent years: Voluntary Guidelines on the Responsible Governance of Tenure (VGGT) and Agro-pastoral Field Schools (APFS). Based on past experience in the region, these tools and approaches work to ensure that vulnerabilities are sustainably reduced in rural communities facing issues similar to the North Darfur.

Voluntary Guidelines on the Responsible Governance of Tenure (VGGT) is a tool for developing the local governance capacities necessary to increase community resilience. This is a comprehensive, fully-inclusive, structured and participatory tool to create dialogue, to support negotiations, to identify win-win pathways, to collaboratively determine priorities and challenges, to formulate joint objectives and activities, and to establish structures for management, decision-making and conflict resolution. VGGT is particularly useful in conflict-ridden areas where land access and land tenure are key factors contributing to conflict.

Agro-pastoral Field Schools (APFS) is an approach to provide the technical capacity required to increase community resilience. This is a group-based, practical-oriented, participatory extension approach. The APFS will provide an opportunity for farmers to learn together, using practical and hands-on methods of discovery learning. APFS emphasizes methods such as observation, discussion, analysis, collective decision-making, presentation and taking appropriate action. Discussion and analysis are also important ways to combine local indigenous knowledge with new concepts and bring both into the decision-making process. Typically, the APFS approach revolves around a planned series of time-bound activities (generally over one agricultural production cycle), involving a group of willing men and women pastoralists and farmers, guided by specially trained men and women facilitators (selected from the local area) or by other lead farmers (“graduating” from completed APFSs). Over the past decade FAO has developed the APFS approach so that it can address combined pastoralist and farmer user groups.

Both tools will be mainstreamed through the North Darfur community support systems and particularly extension services. This will serve as a capacity building and model generation approach. The tools will be applied, tested, and adapted to transfer technology and capacity to select rural communities. Based upon project results, lessons learned will be captured and the programs upscaled throughout the North Darfur and nationally for upscaled application.

The project is designed around three fully integrated Components. Under Component one, the project will build the institutional and planning support required to assist private sector agriculturalists and livestock owners to effectively address climate related conflicts. This will be achieved through setting in place a comprehensive conflict resolution mechanism supported by strategic land-use and sustainable livelihood planning focused upon generating climate change adaptive practices and ecosystem-based resilience. Under Component two, the project will assist private producers to implement climate resilient and adaptive practices. This will be supported by capacity building efforts designed to enhance the effectiveness of extension workers and other government service providers to assist private producers to identify, prioritize, and implement climate resilient practices. Under Component three, the project will make certain that best-practices are captured and mainstreamed. This will include linkages to important national and regional institutional and policy frameworks. This will also include making certain that best practices are comprehensively captured and effectively disseminated for uptake to generate impacts at higher geographic and social scales.

The project will work to strengthen the ability of vulnerable communities to identify emerging climate related challenges, serving to build early warning capacities. The project will set in place innovative tools to manage risk, including concrete tools at the production level and supportive policies and capacities within decision-making structures. This includes making certain gender is well considered and integrated within all project efforts. The project will take an ecosystem-based approach, working to support private enterprise and government service providers to assess resource issues holistically integrating soil, water, weather, forage, forestry, and other factors critical to maintaining the ecosystem services and resilience upon which rural communities depend. The project will approach strategic land use planning as a land-based measure to address poverty,

conflict, and displacement. Finally, the project will result in building resilience of communities, livelihoods, and ecosystems against disasters and weather-related events. These improvements will greatly increase resilience to climate change and variability and will directly contribute to improved food security and nutritional status.

The target beneficiaries are private producers (individual and entrepreneur farmers, agro-pastoralists and pastoralists), private enterprises (MSMEs) and producers associations comprised of the North Darfur's most vulnerable agriculture/livestock producers. These target communities will be benefiting from tangible interventions designed to drive climate resilient and adaptive practices at the producer level. The positive impacts will result in a community-based program that benefits from a strong decision-making framework. The project's direct beneficiaries will include: 20 Villages and 10,000 households (approximate 50,000 people, half of which are women).

Project Framework

The Project Objective is to reduce the vulnerability to climate change of pastoral and farming communities along the migratory routes in North Darfur and improve their social protection, food security and nutritional status.

Component 1: Participatory land and resource use planning strategically addresses climate change adaptation and mitigates resource-based conflicts

Output 1.1 Participatory climate response conflict resolution and decision-making structures emplaced

The project will apply proven Voluntary Guidelines on the Responsible Governance of Tenure (VGGT) as a participatory tool to establish structures for management, decision-making and conflict resolution. In particular, the project will strengthen conflict resolution and decision-making structures focused upon addressing climate-related issues. The project will apply VGGT to support this process, building the capacities of government services providers and community members to utilize this tool. The project will support the completion of comprehensive community profiles focused upon private sector agriculture and livestock producers along the traditional migratory routes. Profiling will cover both the resident population and the mobile population that spends part of its annual cycle in the villages. Profiling will lead to a detailed understanding of socio-economic activities, of status by group, of power structures, of decision-making structures, of recent and current use of natural resources, of age group differentiation, of past and previous

resource-based conflicts, of past and present consultation tools (e.g. Peace Committee, VDC, etc). Profiling will entail a thorough gender differentiation regarding challenges and opportunities.

Based upon the comprehensive assessment of community profiles, the project will support the emplacement of conflict resolution tools. These tools will be focused upon mitigating conflict while addressing the complex challenges related to climate change impacts, resource degradation, and the need for the private sector producers to address economic and food security concerns. This will be done through inputs such as awareness raising on climate change, training, providing information, providing access to conflict resolution tools. The conflict resolution/decision-making structures will be cross-cutting and comprehensive in coverage. The tools will reflect traditional systems while integrating best international principles and practices. The approaches will be neutral and seen to be neutral. Importantly, they will empower private producers and government services agencies to have the capacity to resolve conflicts and to make informed decisions regarding necessary adaptive measures. These structures will assist producers to coordinate implementation of agreements and plans supported through project effort. This direct improvement in governance will provide a basis for social protection and will be consolidated through subsequent project outputs and activities. By project closure, at least 20 villages will be benefiting from improved management and decision-making structures designed to reduce vulnerability and increase resilience.

Output 1.2 Strategic sustainable land use management framework operational to support private sector adaptation and resilience

The project will support the generation of climate change risk and adaptation assessments, financial coping strategies, and complementary sustainable land use management agreements designed as dynamic tools for private sector producers, private enterprises and government agencies to coordinate their efforts to address emerging climate change challenges and associated conflicts. In particular, the project will support the completion and implementation of a comprehensive sustainable land use management framework focused upon improving private producers and enterprises capacity to address climate change impacts. The framework will consist of comprehensive land use planning and management agreements designed to support financial coping strategies. The package of interventions will be designed to address urgent climate change challenges.

To make certain that interventions and approaches are strategic and fundamentally predicated upon by best available information and science, the project will assist producers at the community level to generate climate change risk and adaptation assessments. This process will assist producers and government service providers to more clearly identify constraints in the current land-use management system and climate related challenges.

Private producers will also be assisted to generate financial coping strategies. All three primary user groups will generate financial coping strategies that target both village level and household level concerns. Private sector producers will identify current financial challenges stemming from climate related impacts and design financial coping strategies. This will likely include value chain analysis for key livestock products; identification of alternative and improved livelihood options; market promotion of key livestock products from vulnerable communities; and, development of market information services through smart phone applications and radio information services.

The financial coping strategies will be based upon FAO's international experience with sustainable production approaches that incorporate climate concerns. This will include micro business skills and management. The project will work specifically with private enterprises engaged in the provisioning of goods and services to livestock and agricultural producers. This will include engaging with merchants including those who provide inputs such as feed, fertilizer, and equipment as well as private enterprises engaged in the sale and marketing of farm and ranch commodities. These enterprises will be identified and potential entry points for engagement and support elucidated during the PPG phase.

Financial coping strategies for private producers may include engaging in off-farm work, seeking alternative sources of income at home and abroad; taking out loans from money-lenders, remittances; selling off livestock; seeking government financial assistance; renting out, selling or pawning farm plots; and reducing food consumption. Each of these strategies will be designed to enhance sustainable livelihoods while addressing climate related challenges. The strategies will be linked to APFS training to be implemented under Component 2.

Complementary land-use management agreements will be designed at the community-level to build resilience of vulnerable, private sector producers. The land-use management agreements will inform practices and innovations to be applied under Component 2. The land-use management agreements will be based upon the assessments and potential financial coping strategies. The land-use management agreements will build upon and complement the developed conflict resolution tools. The agreements will be designed to take a cross-cutting, ecosystem-based approach to address resilience. The agreements will focus upon making certain private producers are aligned to manage existing and emerging climate related risks.

The proposed land-use management agreements will be designed to sustainably increase productivity of fragile productive landscapes and both avoid and reduce degradation of agriculture and grazing lands. This will include identifying within the land-use management agreements a focus upon comprehensive sustainable land management practices to make certain the project is fully aligned with CCA Objective 2 regarding land degradation and biodiversity.

Each land use-management agreement will be based in part upon the concept of sustainable production intensification. The FAO concept of Sustainable Production Intensification is part of FAO's vision for sustainable food and agriculture (SFA), is firmly in line with the global initiative of Sustainable Development Goals (SDGs) and utilizes FAO's Sustainable Food and Agriculture approach, which is based on five principles: (i) Improving efficiency in the use of resources is crucial to sustainable agriculture; ii Sustainability requires direct action to conserve, protect and enhance natural resources; (iii) Agriculture that fails to protect and improve rural livelihoods, equity and social wellbeing is unsustainable; (iv) Enhanced resilience of people, communities and ecosystems is key to sustainable agriculture; and (v) Sustainable food and agriculture requires responsible and effective governance mechanisms.

Each of the target communities will adopt structures that are designed to address conflict issues and generate balanced benefits for both sedentary and mobile producers. The process will be supported by government extension agencies and other service providers in order to build their capacities to support community-based resilience efforts. The participatory development and adoption of these agreements will further improve social protection. The land use plan and associated strategies will assist producers to work together to define objectives and principles. The strategies will clarify will roles, responsibilities and management rights of the various groups. This will include specifically addressing issues related to gender, food security, and sustainable livelihoods. The strategies will respond to and incorporate the guidance of national level strategies such as the NAPA and NDC.

Using regional and global lessons, the strategies will be designed as dynamic tool for private sector producers and government agencies to coordinate their efforts to address emerging climate change challenges. Each community strategy will be evaluated and updated annually. This will include an evaluation of current resource management trends and emerging climate change impacts. In this way, the management strategies will create a framework whereby producers have an increased ability to identify and adopt actions designed to address adaptation and resilience challenges. This will assist stakeholders to identify emerging climate related impacts and provide for community-wide early warning systems using tools that are appropriately scaled to local conditions. The strategies will help to inform specific technical interventions to be supported through project effort.

Component 2: Pastoralists and farmers adopt sustainable, climate resilient practices and livelihoods

Output 2.1 Concrete investments identified and prioritized to strengthen the resilience of private producers (i.e. individual entrepreneurs, which are generally family farmers, pastoralists and agro-pastoralists, and MSMEs)

Building upon and integrating with Component 1 activities, the project will develop a set of agreed technologies and practices to be used by pastoralists and farming communities to reduce pressures on limited resources and assist producers to lower their risks and exposure to climate change impacts. This will link with the activities and outputs generated under Component 1, including VGGT, financial coping strategies and land-use management strategies. Prioritized investments will align with national level strategies and programs such as the NAPA and NDC. Investments will be identified through participatory, site-specific, science-based assessment of strengths, weaknesses, opportunities and threats. Using APFS, local neutral experts will work with pastoralists and farmers to identify challenges and design sustainable interventions scaled to local capacities. This will include a clear investment structure with identified roles and responsibilities. Considered approaches will be predicated upon FAO's global and regional practices. They will be designed to contribute to sustainable resource management, food security, and sustainable economic development for private sector producers.

Practices and approaches will focus upon reducing pressures on limited resources to assist producers to lower their risks and exposure to climate change impacts. **Solutions** will be introduced into the farming systems and the practices and technologies used for livestock production, agricultural production and water management. Practices will be determined and applied based upon full stakeholder (agriculture and livestock producer) engagement. This will be facilitated by extension officers who will be capacitated through project interventions. The process of identifying specific packages of innovations and changes to current unsustainable practices, a fundamental step in the APFS approach, will be supported by FAO global experts who will draw upon successful international principles and practices that may be adapted and applied to best suit local conditions. A detailed listing of project innovations will be determined and detailed during the PPG phase. Principles laying at the basis of **f practices and approaches to be promoted and upscaled** are listed below.

Livestock Production **Solutions to Climate Change Related Challenges :**

Livestock management approaches will focus upon improvements to herd quality. This will increase the profitability of production, limit resource competition, and alleviate points of conflict. Appropriate rangeland enhancement tools will be identified. Models to identify investment opportunities (seeding and rest/rotation practices) will be drawn upon, delivering resiliency improvements. Investments in forage improvements will be considered to buffer negative consequences from rainfall variability and temperature changes. A seasonal feeding calendar can be established and the forage sources identified on a seasonal basis. Constraints the herders face in livestock feeding can be highlighted and appropriate forage shrubs or plants can be introduced as well as conservation techniques of green forage or weeds. Alternative livestock systems likely to generate immediate income can be promoted such as fattening.

Improved production of fodder is an integral part of land use management and is central to livestock production as well as to reduction of livestock loss. Integrating with outcome 1 activities, the project will improve fodder availability and access by engaging pastoralists in animal feed production and range management practices. These include:

- Restoration of degraded rangelands and actions against desertification (e.g. community tree/shrub/grass planting). This includes provision of training and inputs among Rangeland Management and Producer Groups involved in planting pastures and reseeding degraded rangeland with improved grass; and harvesting pods and foliage from invasive plant species for feed production, while controlling their further spread.
- In agropastoral areas, promote good agriculture practices, such as intercropping, to maximize crop yields and improve the nutrition quality of crop residues while diversifying food available for people. This includes provision of crop (sorghum, cowpea) and grass seeds, fodder enriching ingredients (urea, molasses), and training to households.
- Linking fodder/feed producers and traders to consumers. This will include strengthening the capacity of agropastoral/pastoral producer organizations to participate in the feed/fodder value chain, and stabilize linkages between producers and consumers. This involves capacity development for all involved value chain actors to improve synergies, effectiveness and efficiencies along the chain (from production to consumption); establishment of Public-Private Partnerships (involving local agro(pastoral) producer groups, government and private sector) to stimulate investment in strategic fodder production markets.
- Support to storage and processing of feed/forages. This requires providing necessary equipment and training, especially on good conservation and value addition (e.g. adding molasses). This includes provision of inputs to producer groups (e.g. hammer mills, fodder storage and processing sheds, compressing machines for hay bales) to effectively process and store feed and forages, and related capacity development also using APFS approaches.

Prioritized investments will seek out innovative methods to address issues related to traditional migratory routes. This may include demarcation and/or infrastructure development. For instance, if migratory herders had access to improve kraal facilities with available water and banked fodder resources, many of the issues related to resource demands and conflicts could be avoided. This would improve landscape resiliency and capacity to support the demands of all stakeholder groups.

Agriculture Production **Solutions to Climate Change Related Challenges:** Farmers will be assisted to identify appropriate investments in farm-level improvements designed to increase production through climate-resilient cropping and cropland management. This may include introduction of short-maturing and drought-resilient crop varieties, establishment of community seeds multiplication system, seed-banks, grain stores, investments in simple equipment to improve soil retention and fertility, and identification and costing requirements to adopt improved crop varieties linked to value-chains. Emphasis will be placed upon interventions that are cross-cutting. For instance, the project will investigate proven systems for nurseries and woodlots, shelterbelts and other integrated approaches designed to address crop and soil management improvements in support of

climate-smart practices. The project will assist producers to identify and invest in opportunities related to renewable energy resources to avoid excessive charcoal utilization and further alleviate climate-induced desertification. The project will promote small farm cultivation machinery for soil tilling, levelling, planting, weeding harvesting, and fodder cutting and chopping operations. Wide-scale adoption and access to this farm machinery will be available to farmers through credit arrangement with financial and social fund institutions.

Water Resource Management **Solutions to Climate Change Related Challenges:** Interventions will assist all stakeholders to improve water resource management. This has been identified as a key production constraint and point of conflict for all three production approaches. This issue will become increasingly problematic with the advancement of climate change impacts. Development of ecologically-sound water points will be prioritized – positioned to mitigate localized land degradation, soil erosion and gully formation caused by heavy livestock movement and watering in a given area. This will likely include design and support of smart irrigation systems with solar pumps, improved water harvesting, increased efficiency of water use, training and support for conservation agriculture techniques. The project will assist producers to identify cost-effective and sustainable approaches including rehabilitation of structures such as water yards, subsurface dams and hafiers or reservoirs.

The project will support establishing water users groups and a tariff system for sustainable maintenance and management of the system.

The ‘caisse de résilience[1]’ concept[2] will be tested to facilitate and improve the financial inclusion of vulnerable categories such as women and youth and strengthen social cohesion. It is particularly relevant to this post-conflict context, where alternative livelihoods through financial inclusion are needed as well as enhancement of technical skills and activities strengthening social cohesion. Capacity of agro-pastoralists will be built in the APFS, micro-finance schemes will be developed in the APFS and Dimitra listening groups will be set up prior to APFS in order to improve social dialogue, trust amongst different community members and stakeholder groups and build the social capital needed for joint landscape management.

Output 2.2 Agro-pastoral Field Schools support application of climate-smart practices

The project will support the implementation of prioritized improved practices through the Agro-pastoral Field Schools (APFS) while simultaneously strengthening the capacity of extension services. The APFS will be based upon FAO’s global practices and adapted to the particular requirements of Sudan. The APFS will be implemented through the North

Darfur State and Locality Extension services. The APFS will be used as a capacity building tool designed to complement and strengthen existing extension services. APFS will target each of the main user groups using programs tailored specifically to individual user group requirements.

Training materials will specifically focus upon climate change adaptation issues relevant to the North Darfur. The programs will provide a basis for improving the resilience and reducing risks faced by vulnerable communities. A specific cohort will be designed to target women to support gender-specific capacity improvements. The APFS will serve as a conduit to provide **seed funds** necessary to implement and test identified infrastructural and production improvements. This will help to make certain these LDCF investments are strategic and monitored to determine which practices are the most cost-efficient and effective at addressing climate change related issues.

Component 3: Lessons learnt captured, mainstreamed and upscaled

3.1 Results strengthen national level resilience and adaptation policies

National programs, policies, and plans related to land tenure, pastoralism, agriculture, social protection, food security, nutrition and climate change will be amended and improved based upon project results. This will include strengthening national level decision-making required to reduce climate change challenges.

Several national initiatives exist which may be able to support replication and sustainability of the Project's impact. These include the National Drought Resilience Initiative (NDRI) and the National Agriculture Investment Programme (NAIP). The Project will facilitate the access of North Darfur to these and other national support programmes. This will help generate a national level political commitment to the Project success, it will also help ensure that future national policy development can take lessons from North Darfur into account.

The North Darfur NAP is currently under preparation. The draft NAP sets out the strategic, long and medium term actions necessary for adaptation to climate change in Sudan. Under the NAP, the Government has established a NAP focal point in the North Darfur State Ministry for agriculture and NAP Technical Committee in North Darfur. This Committee is multi-agency and multi sectoral. It will play a key role in guiding and supporting all climate change adaptation programmes, and so will support and guide all technical activities in this Project. It will receive both formal and on-the-job training, in order to be able to play a more proactive role in reducing climate vulnerability in the

future. As project results come on-line, they will be used to inform the NAP and other government processes and policies. Through this effort, the capacities of government agencies will be greatly strengthened.

State policy and plans related to land tenure, pastoralism, agriculture, social protection, food security, nutrition and climate change will be amended to better address climate change issues based upon project findings and on-going results. State plans and policies related to land tenure, pastoralism, agriculture, food security, nutrition and climate change will be assessed and gaps and weaknesses identified. Recommendations for amendments will be developed and promoted by NAP Technical Committee with project support.

3.2 Project lessons captured and disseminated

Based upon a comprehensive project communications strategy, best practices and lessons will be disseminated using a suite of knowledge management and communication products. These products will be produced in English, Arabic, and French as appropriate to facilitate broad regional uptake.

Systematic documentation will take place of good practices and lessons learnt from implementation of the project, which will be translated into knowledge products and communication outputs. During the PPG, a project communications strategy will be developed. This strategy will aim at capturing best practices generated. The effort will focus upon target communities as well as making certain lessons learned are captured for upscale across a larger geographic region incorporating a wider group of private producers. Best practices including VGGT and APFS activity will be collated and systematically organized. They will be presented in a series of communication methodologies scaled to local producers, extension workers, government decision-makers and other key stakeholders. The aim will be to make certain lessons gleaned from project activities are fully-scalable by a larger audience across larger geographic areas. Communication approaches will include development of awareness building materials, generation of electronic and print media publications, and a series of awareness building workshops and other out-reach programs to be implemented regularly throughout the project period.

3.3 Effective Monitoring and Evaluation Implemented

Project monitoring and evaluation will provide the basis to guide adaptive management, and promote the uptake of knowledge, including gender mainstreaming. Project activity will provide the basis to guide adaptive management, and promote the uptake of knowledge, good practices and successful approaches, including gender mainstreaming. This will be achieved in part through the project's Monitoring and Evaluation efforts. Based on the gender analysis and action plans that will be developed during the PPG, the project will ensure that decisions made, and interventions proposed for implementation, consider the potential impacts and outcomes for different groups within society, with particular focus on the roles played by men, women and youth. In line with the principles of integrated natural resource management, the project will promote a participatory approach to monitoring, evaluation and learning, involving all relevant stakeholders, including local communities. The focus will include project level monitoring, to feed into FAO's global monitoring of its GEF and LDCF portfolio, and to contribute to GEF/LDCF's global monitoring system.

1.4 Additional cost reasoning

The vulnerable communities in the Project intervention areas face a series of challenges including climate change. Climate change has considerably added to natural resource degradation and has increased uncertainty and risk. It is not, however, the only challenge facing those communities. The complex nature of the environment and the socio-economic situation means it is not possible to clearly separate out the climate change challenges from the other challenges. This demands cross-cutting and innovative approaches. The LDCF funds are to contribute to a mosaic of peace, resilience and development efforts in North Darfur.

From these investments, 3 projects have been valued as mobilized investment supporting the achievement of the LDCF project objective and outcomes.

In support of the achievement of results under component 1, the FAO implemented *Strengthen the Sudan Meteorological Authority's hydro-meteorological network and climate services* project helps inform the sustainable land and resource use planning through the provision of improved climate data services. The investment mobilized to the benefit of component 1 from this project is USD580,000.

The Dutch-funded project *Building food system resilience in protracted crises (FNS-REPRO)*, has a strong focus on the Gum Arabic value chain development as a mechanism to increase the resilience of communities and their food security status, as explained above. The specific outputs of the project (Output-1: Improved Inclusive access and management of local natural resources; Output-2: Improved livelihood and income opportunities along selected value chains; Output-3: Enhanced knowledge, skills and capacity of local communities around nutrition-sensitive livelihood support; Output-4: Established and implemented learning mechanisms that reinforce field activities and facilitate improved

policy and practice on food system resilience) are tightly linked to LDCF project results. From its very large fund, an approximate USD7,420,000 has been valued as mobilized investment in support of component 2 of the LDCF project.

The EDF-funded *Wadi El Ku Catchment Management Project – Phase II* project will co-finance component 2 of the project (USD1,000,000) as it significantly contributes to natural resource restoration and value chain development.

Coordination with these 2 projects will ensure a wider geographic scope of project interventions and a broader diversification of livelihoods, and therefore enhanced climate change resilience of rural communities.

Furthermore, the main executing partner of this project, the Higher Council of Environment and Natural Resources (HCENR), will be providing in-kind support to the project component 3 and to the general management of the LDCF project, respectively for estimated amounts of USD500,000 each.

LDCF funds at roughly USD 2.4 million are 19% of the entire budget estimated at USD 12.4 million. LDCF funds will build upon and complement the baseline by providing the additional costs required to ensure that climate variability and climate resilience is mainstreamed into development processes.

1.5 Adaptation benefits

Direct beneficiaries of this project will include approximately 10,000 households in 20 villages. These households or approximately 50,000 people are currently some of the most vulnerable in Sudan. As noted, they rely upon agriculture and livestock production for all aspects of their well-being. Currently, these persons – male and female – reside in an area where resources are becoming increasingly scarce and competition for these resources is becoming increasingly fierce. With the additionality provided by LDCF investment, vulnerabilities will be alleviated through more structured resource management and increased capacity to identify and invest in production methods that are better aligned to deliver climate change adaptation and resiliency benefits. The project will have outsized impacts in that these target communities are representative of only a small percentage of the total population facing similar challenges. If this project is successfully implemented, lessons learned and models established will be easily replicable across a much larger geographic area in order to benefit a much larger segment of at-risk or vulnerable society. This will be achieved and enhanced through the project's consolidated

efforts to make certain lesson-learned are systematically captured for upscale and capacities are strongly built within relevant government and community institutions to carry forward best practices.

1.6 Innovativeness, sustainability and potential for scaling up

Innovation: This project represents a first attempt to establish innovative programming designed specifically to address the unique conflict and adaptation challenges faced in the North Darfur, particularly conflicts between private livestock and agriculture production sectors as they struggle to address challenges associated with increased competition for resources altered and diminished as a result of climate change. Although the project will build upon well-proven models such as agro-pastoral fields schools, these models will be adapted to the unique cultural and environmental situation of the North Darfur. The project will also be on the vanguard in terms of identifying appropriate interventions best suited to assist vulnerable communities to address climate change related issues within the livestock and farming sectors. This will be done through a strategic identification of issues followed by the design and implementation of innovative approaches that are uniquely tailored for the North Darfur.

Sustainability: The project will ensure sustainability through capacity building and mainstreaming of best practices within government and community institutions. The project will also be certain to monitor and capture best practices through a rigorous system to be fully designed during the PPG and executed during project implementation. The final project design will include the generation of a sustainability plan that is linked to the project's capacity building and communications strategy. This will go beyond simply assisting with making certain information is capture and disseminated. The sustainability plan will make certain that capacity and financial resources exist to carry forward project emplaced practices. The sustainability plan will also clearly identify and make certain that government and institutional policies and plans fully integrate project results. This will include budgeting and recommendations for regular awareness building and stakeholder engagement workshops and seminars to make certain government actors and decision-makers are consistently made aware of project challenges and advances. The NAP Technical Committee will be instrumental in this effort.

Up-Scaling: The project will make strenuous efforts to make certain best practices are upscaled locally, regionally, nationally and globally.. Elements of the Project will be relevant to other places, both in Sudan and elsewhere in north and northeast Africa. Project success will be positioned for upscale in operations funded by multilateral donors. Through the NAP, and with support from and HCENR, and also through the ARC network, these successes can be replicated. FAO is particularly well positioned to assist with this effort. FAO has offices in each of Sudan's States. In addition, FAO has global practices that will help to not only inform project effort and implementation but will also work to promote best practices and lessons learned for global upscale through a number of FAO's visibility and marketing tools.

Competencies and Lessons Applied: FAO has significant experience that will be applied to strengthen this Project. Over the past decade – in partnership with government agencies and institutions and civil society organizations – FAO has implemented a series of national, regional and global humanitarian relief, livelihood protection/recovery and agricultural development programmes and projects. This project will draw from the above best practices to determine and pilot approaches to peace and development in North Darfur, and this can be used as a model for other, larger development programmes. The following lessons learnt or best practices have been documented in the Country Programming Framework for Sudan – Plan of Action (2015-2019): Resilient Livelihoods for Sustainable Agriculture, Food Security and Nutrition will be applied.

[1] This concept has been developed and tested by Care international but is adopted by EU-FAO and DFID-FAO projects (Pro-ACT 1 and 2) in Burundi. This approach is used in a number of countries (*Uganda(since 2008); Central African Republic, Liberia, Malawi, Chad et Mali (depuis 2014); Guatemala et Honduras (since 2013)*).

[2] The concept of ‘Caisse de résilience’ underpins an approach centered on agro-pastoralists including women and men integrating social, financial and productive activities (FAO, 2016)..

[1] Draft North Darfur State Adaptation Plan, 2015.

[2] IFAD, 2013. Sudan - Environmental and Climate Change Assessment

[3] See “Addressing natural resources issues in Darfur through a Participatory and Negotiated Territorial Development approach - preliminary results” (FAO, 2012), and; “Programme for Agricultural Recovery, Reconstruction and Development in the Darfur Region” (FAO, 2013) and; “Standing Wealth - Pastoralist Livestock Production and Local Livelihoods in Sudan” (UNEP, 2013) and; the (draft) State Adaptation Plan for North Darfur.

[1] Socio-economic and demographic indicators, Central Bureau of Statistics, 2011

[1] <http://www.worldbank.org/en/country/sudan>

[2] Behnke, Roy, 2012. The Economics of Pastoral Livestock Production and Its Contribution to the Wider Economy of Sudan

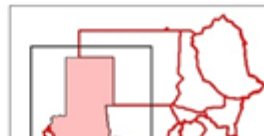
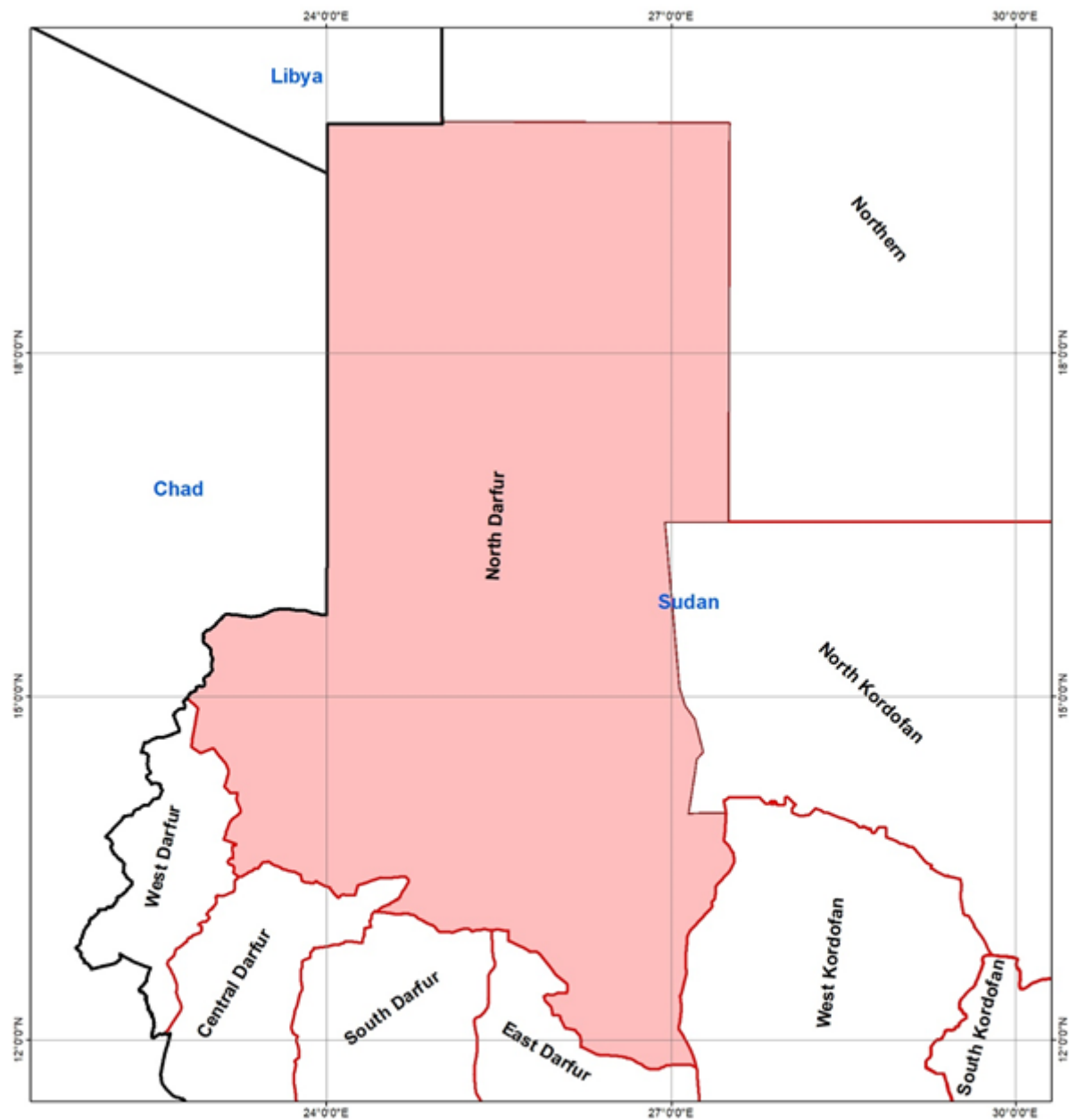
[3] FAO Statistics, 2014

1b. Project Map and Coordinates

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

As noted, the project will cover the areas that lie to the north and northwestern parts of North Darfur state, mainly North Mellit, Sayah, North Kutum, North Kebkabyia, Umbaru, Saraf Omra, Elserieif, Kuma, North Umkaddada, and Malha.

Geographic area	Routes and Targeted Villages	Route distance
North Kutum	1)Damrat El Sheikh 2) Aldoor 3)Abd Elshakoor 4) Deissa	Damrat El Sheikh up to Deissa around 180 kms
North Kebkabyia	1)Abu Dongo 2) Daday 3) Aramba 4) Goora 5) Birgu	From Abu Dongo up to Birgu is 40 kms.
Mellit	1)Sayh 2) Wad Toto 3)Kosskori 4)Medo	Sayah > Wad Toto 55 kms. Wad Toto > Kosskokori 60 km. KOsskori > Medo 25 kms
Kuma	1) Um Hegailege 2- Um Elhussein 3) El Kuma	Kuma > Um Hegailege 60 kms. Hegailege > Um Elhussein 40 kms. Um Elhussein > Kuma 45 kms.
Um Kedada	1) Abu Hemaira 2) Um Sidra 3) Al Arais 4) Al Abiad	Abu Hemaira to Um Sidra 95 kms. Abu Hemaira > Al Abiad > Al Arais 80 kms



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:

N/A

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.

Two stakeholder consultations were conducted during the development of this PIF, one at State level (in North Darfur) and one at national level. A summary of the State level meeting is presented in Annex. Initial consultations during the PIF development stage involved a broad range of Sudanese agencies, governmental, non-governmental and technical, as well as representatives of development partners.

The following stakeholder table reflects those identified for consultation during the project development phase. A full stakeholder engagement plan will be developed during the PPG phase.

Stakeholder	Mandate	Role and Means of Engagement
National		

High Council for Environment and Natural Resources (HCENR)	<p>Responsible for the strategic development of all aspects of environmental protection and forestry, including GEF focal point. Coordination on environmental and natural resources</p> <p>Promoting the mainstreaming of environmental conservation</p> <p>UNFCCC focal point and led preparation of the NAP</p>	<p>Overall project lead;</p> <p>Responsible for project success to Government of Sudan.</p> <p>Provide technical and logistical support and is also a co-financier.</p> <p>Contribute to assessing impact of the project;</p> <p>Benefit from capacity building activities. Support coordination with similar projects and integration into NAP implementation</p> <p>Responsible for technical guidance of the project;</p> <p>Benefit from capacity building.</p>
Ministry of Animal Resources (MOAR)	<p>Responsible for the strategic development of all aspects of the livestock and rangeland sector, including policy and providing technical support to stakeholders.</p>	<p>Support technically all activities;</p> <p>Benefit from capacity building;</p> <p>Responsible for promoting upscaling and replication;</p>
Ministry of Agriculture and Forests (MOAF)	<p>Responsible for the strategic development of all aspects of the agriculture sector (including traditional rainfed), including policy and providing technical support to stakeholders.</p>	<p>Support technically all activities;</p> <p>Benefit from capacity building;</p> <p>Responsible for promoting upscaling and replication;</p>
State, Locality and Community Level		
Darfur Land Commission	<p>Role in land conflict resolution processes</p> <p>Preparation of maps</p>	Support technically all activities
North Darfur State Ministry of Production and Economic Resources	<p>Responsible for policies, plans and projects to support agriculture (including rangelands) and agriculturalists in North Darfur.</p> <p>Establish and maintain extension services.</p> <p>NAP Focal Point in North Darfur.</p> <p>Responsible for implementing pertinent elements of the NAP in North Darfur.</p>	<p>Cofinancing</p> <p>Support technically all activities;</p> <p>Lead upscaling and replication;</p> <p>Benefit from capacity building;</p>

	<p>Responsible for policies, plans and projects to support livestock sector in North Darfur.</p> <p>Support extension services.</p> <p>Responsible for implementing pertinent elements of the NAP in North Darfur</p>	<p>Cofinancing</p> <p>Support technically livestock related activities;</p> <p>Support upscaling and replication;</p> <p>Benefit from capacity building;</p>
North Darfur NAP Technical Committee	The NAP Technical Committee was established in 2014 with the mandate of promoting and coordinating implementation of the NAP in North Darfur	<p>Ensure coordination</p> <p>Benefit from capacity development.</p>
North Darfur natural resource agencies	<p>The ministries responsible for water, energy, gender have related mandate such as:</p> <p>Develop and implement policy and plans;</p> <p>Establish and maintain extension services;</p> <p>Implementing pertinent elements of the NAP in North Darfur.</p>	<p>Support technically related activities;</p> <p>Benefit from capacity building;</p> <p>Responsible for promoting upscaling and replication;</p>
Locality government agencies	<p>‘Locality’ is the level of government closest to communities in Sudan. Depending on available resources, locality governments:</p> <p>Provide technical support to communities</p> <p>Provide a mechanism to feedback community concerns to higher levels of government</p> <p>Support conflict resolution amongst communities.</p>	<p>Support project implementation at community level;</p> <p>Benefit from capacity building;</p>
Native Administration	<p>Responsible for linkages between government and customary governance mechanism;</p> <p>Important role in conflict resolution.</p>	<p>Partner at community level;</p> <p>Benefit from capacity building;</p>
Agricultural Research Centre (ARC)	A well reputed national research agency with field offices in most States including North Darfur. Undertaking action-oriented research with vulnerable communities in North Darfur.	Technical support during implementation (potential service provider).

Forest National Corporation (FNC)	A well reputed national research agency with field offices in most States including North Darfur. Undertaking action-oriented research with vulnerable communities in North Darfur.	Technical support during implementation (potential service provider).
Nomadic Development Council	National government body to promote nomadic communities, with focus on Darfur	Partner at Darfur level, particularly with mobile communities
UNEP	Implementing activities to support drought resilience of vulnerable pastoralist and agro-pastoralist communities.	Partner at community level.
National NGOs (e.g. Almassar, KSCS, CRLRS, KAEDS, DDA)	National NGO providing support to pastoral communities across Sudan and in particular in Darfur. Implementing activities to support drought resilience of vulnerable pastoralist and agro-pastoralist communities. Many are also engaged in relevant gender issues.	Partner at community level.
International NGOs (e.g. Concern International, Practical Action, COOPI, Oxfam)	Implementing activities to support drought resilience of vulnerable pastoralist and agro-pastoralist communities.	Partner at community level.
Private Sector		
Livestock producers and agriculturalists	Small private enterprises responsible for agriculture and livestock production.	These persons are the direct beneficiary of project activities. They will be highly involved in all aspects of project activity.
Private Enterprises	Small and medium level enterprises responsible for selling and provisioning materials required to support private sector agriculture and livestock enterprises	Small and medium level enterprises associated with the agriculture and livestock industry will be key stakeholders for the project. They will be engaged throughout the project with their inputs secured to help make certain project activities fundamentally supportive of long-term, stable economic development.

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).

The project is designed to be consistent with the GEF “Policy on Gender Mainstreaming” and the GEF approach on gender mainstreaming and women’s empowerment.

A recent study completed by UNEnvironment in North Darfur^[1] found that gender-based disparities in Sudan are substantial with differences particularly prevalent in natural resource management. This includes challenges related to access to and control over resources, ownership and marketing. The recent conflicts have had a particular damaging impact on women in Darfur^[2]. One notable impact has been the creation of a large number of women-headed households in vulnerable communities, as the men have migrated in search of work or to protect their land. Women in the mobile pastoralist communities (one of the two target communities of this Project) are traditionally very reserved. The project looks forward to addressing this highly complex challenge.

This Project will acknowledge gender differences, it will assess and comprehensively understand them, and it will then design and implement activities that promote women’s empowerment and gender equality. The Project will seek to lessen the impact of climate change on women and other particularly vulnerable groups and contribute to women’s empowerment and gender equality.

The project will adopt a participatory approach for maximum impact through the inclusion of all relevant social groups, including marginalized people (e.g. unemployed youth), with attention to the participation and inclusion of women whilst respecting the norms, values and customs of targeted communities. A project specific gender mainstreaming plan will be developed during the project design (PPG) phase, with actions to be taken under each component and necessary budgetary provision as appropriate. The assessment will determine at the household and State levels: the number of female resource users; the number of women headed households; the differentiated impacts of climate change and drought on women; the different knowledge base of men and women; strategies for mainstreaming gender into natural resource management; strategies for optimizing the participation of women in natural resource management and optimizing their economic benefit.

Specific targets will be set during project design (PPG phase) and reflected in the results framework to ensure inclusion and participation of women and girls both in site-based project activities (such as the development of alternative income generating activities, conservation actions, and activities aimed at capacity enhancement), as well as ensuring that opportunities are created for women to take up positions of leadership within the management hierarchy of the project governance structures. The initial gender target is that at least 40% of those directly benefiting from the project will be women.

[1] UNEP, 2014. Gender Mainstreaming in the Wadi El Ku Catchment Management Project.

[2] It is noted that, prior to the conflicts, gender equality and women's empowerment were greater in Darfur than in other regions of Sudan.

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.

As detailed in the project framework, the main beneficiaries and project stakeholders are private sector **producers (i.e. agro-pastoralists, pastoralists and farmers)**. These private sector actors will be actively engaged in project activities, including implementation.

“Private producers” are farmers and ranchers who produce commodities. These farm and ranch businesses focus upon the production and sale of agriculture and livestock goods. They are often motivated by both profit and household subsistence. Private producers in the Sudanese context cover three general categories: pastoralists, agropastoralists, and sedentary farmers.

“Private enterprise” incorporates the broader private sector associated with livestock and agricultural production. Private enterprise may be inclusive of private producers and private merchants. Merchants supply private ranchers and farmers with goods and services. This may include production inputs such as feed, fertilizer, and equipment and/or the sale and marketing of farm and ranch commodities.

Assisting private producers to identify and implement improved practices is the primary project objective. However, private producers along with private merchants, government extension officers and government regulators determine pricing, marketing and other value chains issues. This combination of actors ultimately determines and incentives the adoption of improved practices.

5. Risks

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 following risks have been identified with preliminary mitigation measures. Risks will be reviewed comprehensively, and mitigation measures will be strengthened during the PPG phase.

Risk	Impact/Probability Rating (Low: 1 to High: 5)	Management Strategy
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<p>Security challenges mean the Project cannot implement activities at chosen sites. Very high levels of insecurity in previous years made implementation of development activities in many parts of Darfur impossible.</p>	<p>Impact: 4 Probability: 3</p>	<p>The security situation in North Darfur is currently better than in recent years.</p> <p>Recent political changes in Sudan will likely generate some adjustments in terms of governance. However, the fundamental concern of the government and represented stakeholders regarding the importance of addressing the barriers and challenges covered by this project will likely remain high with strong support consistent.</p> <p>This may represent an opportunity for the project to have a pro-active role in supporting any revisions to institutional and policy frameworks.</p> <p>The Project will invest in developing and maintaining strong working relations with all stakeholder groups (this has already started), thereby increasing its acceptance by all groups and its accessibility to all sites.</p> <p>Insecurity tends to flare-up and be localized and be of a short duration. As the Project will work in many sites, during insecure periods at one site, the Project will continue implementation at other sites, meaning such insecurity leads to delays rather than stopping the Project.</p>
<p>Outside forces pull the stakeholder groups apart, making conflict resolution and community agreements impossible.</p> <p>The conflicts in Darfur are complex and multi-faceted; even if communities are happy to cooperate at one site, external forces may pull them apart.</p>	<p>Impact: 3 Probability: 3</p>	<p>Progress is being made on the overall Darfur peace process, with broad support from the international community, and it is to be hoped that this will continue.</p> <p>Whereas outside forces may lead to temporary challenges at some sites, it is very unlikely that these challenges will be sustained or widespread – hence this challenge should lead to delays rather than stopping the Project.</p>
<p>Weak vertical and horizontal coordination undermines the Project efficiency. Capacity is low in government agencies in Darfur, and there are many Projects implemented, by local, national and international agencies, through different modalities. There is a danger of duplication and confusion.</p>	<p>Impact: 3 Probability: 2</p>	<p>Given the recent history in Darfur, there will of course be some inefficiencies in the implementation of all projects, but this will not be a major factor.</p> <p>The role of the North Darfur NAP Technical Committee in supporting coordination will be key, and the Project will build their capacity in this respect. The project will also benefit from a strong management unit.</p>

Conflicts amongst the resources users at Project sites are insurmountable.	Impact: 3 Probability: 2	One of the criteria for selecting sites is the possibility of success; sites with very high level conflicts will be avoided.
Animal disease epidemic. Should the Project target areas experience a disease epidemic, it will make it very difficult to test and develop new technologies and practices. It may also make the communities more risk averse, and less willing to participate in the Project.	Impact: 4 Probability: 2	Animal diseases are a common factor and high scale epidemics are unlikely. The Project management will monitor the situation closely and take remedial action if necessary.

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.

The project will actively coordinate with relevant Government Ministries, Departments and Agencies, UN Agencies, and other development partners as well as NGOs, private enterprises and research institutions to facilitate synergies and avoid duplication of efforts. Coordination will take place through established mechanisms including Project Steering Committee, sharing of reports and ad hoc meetings. This will be supported by a technically strong management unit. During the PPG phase, further in-depth consultations will be undertaken to establish/strengthen partnerships and practical modalities for linking and collaborating with relevant ongoing and planned interventions.

At the national level, HCENR will be responsible for coordination. The Project takes place within the framework of the National Adaptation Plan (NAP) which has established a national coordination mechanism, supported by HCENR. The HCENR, will ensure coordination with all related activities, including activities of MOAR, MOAF, ARC and FNC. FAO, as GEF Agency, will be responsible for ensuring coordination with other internationally supported initiatives, including those financed by GEF.

At the State level, the Project takes place with the framework of the DDS and the North Darfur Adaptation Plan, both of which have established coordination mechanisms. Notably the inter-sectoral North Darfur NAP Technical Committee will take the lead for coordination at the State level. Coordination will also be advanced by the North Darfur State Ministry of Production and Economic Resources. Supported by a technically strong management unit, the North Darfur State Ministry will therefore be the main executing partner of the project, pending the micro-assessment of operational capacity to be carried out during PPG.

GEF Financed Projects

The following table lists the most pertinent GEF and LDCF financed projects in Sudan and briefly describes intended coordination arrangements.

The final project document will reflect a coordination mechanism to make certain that this proposed project is well aligned with and benefiting from engagement with the on-going suite of GEF financed initiatives. Coordination will make certain that other GEF projects are engaged through invitation to participate in appropriate capacity building efforts and the provision of outputs and knowledge products. Coordination will also include regular meetings and discussions to be facilitated by this proposed project between executing agencies responsible for implementation of the various GEF financed initiatives. The specific coordination mechanisms will be reflected in the final project document's management description and reflected in the stakeholder engagement strategy designed during the PPG.

Project	International partners and basic information	Proposed Coordination arrangements
Implementing NAPA Priority Interventions to Build Resilience in the Agriculture and Water Sectors to the Adverse Impacts of Climate Change in Sudan	<ul style="list-style-type: none"> · LDCF/UNDP · LDCF contribution: \$3 million · Completed 	The proposed project will benefit from the lessons learnt and the national level capacity established.
Sudan Sustainable Natural Resources Management Project (Great Green Wall Initiative)	<ul style="list-style-type: none"> · GEF/World bank · GEF contribution: \$7.7 million · Ongoing 	<p>Activities and inputs may be shared, lessons will be shared.</p> <p>There is geographical complementarity as the intervention states are different.</p>
Climate Risk Finance for Sustainable and Climate Resilient Rain-fed Farming and Pastoral Systems	<ul style="list-style-type: none"> · LDCF/UNDP · LDCF contribution: \$5.7 million · Ongoing 	<p>Activities and inputs may be shared, lessons will be shared.</p> <p>There is geographical complementarity as the intervention states are different.</p>
Implementing Priority Adaptation Measures to Build Resilience of rainfed farmer and pastoral communities of Sudan, especially women headed households to the adverse impacts of Climate Change	<ul style="list-style-type: none"> · UNDP/CIDA (follow-up to closed UNDP/LDCF Project) · Ongoing 	<p>Activities and inputs may be shared, lessons will be shared.</p> <p>There is geographical complementarity as the intervention states are different.</p>

Livestock and Rangeland Resilience Program	<ul style="list-style-type: none"> · LDCF/IFAD · LDCF contribution: \$8.526 million · About to start 	<p>Activities and inputs may be shared, lessons will be shared.</p> <p>There is geographical complementarity as the intervention states are different.</p>
Rural Livelihoods's Adaptation to Climate Change in the Horn of Africa - Phase II	<ul style="list-style-type: none"> · LDCF/AfDB · LDCF contribution to Sudan: \$7.56 million · Hard pipeline 	<p>Lessons will be shared.</p> <p>There is geographical complementarity as the intervention states are different.</p>
Enhancing the Resilience of Communities Living in Climate Change Vulnerable Areas of Sudan Using Ecosystem Based Approaches to Adaptation (White Nile State)	<ul style="list-style-type: none"> · LDCF/UNEP · LDCF contribution: \$4.284 million · Hard pipeline 	<p>Activities and inputs may be shared, lessons will be shared.</p> <p>There is geographical complementarity as the intervention states are different.</p>
Sudan Sustainable Natural Resources Management Project II	<ul style="list-style-type: none"> · GEF 6/World bank · Soft pipeline 	<p>Activities and inputs may be shared, lessons will be shared.</p> <p>There is geographical complementarity as the intervention states are different.</p>
Building resilience in the face of climate change within traditional rain fed agricultural and pastoral systems in Sudan	<ul style="list-style-type: none"> · GCF/UNDP · Soft Pipeline 	<p>To be determined at the appropriate time.</p>
Enhancing adaptive capacity of local communities and restoring carbon sink potential of the Gum Arabic belt, expanding Africa's Great Green Wall	<ul style="list-style-type: none"> · GCF/FAO · Under preparation 	<p>To be determined at the appropriate time.</p>
Strengthening adaptation planning processes and capacity for implementation of adaptation actions in agricultural and water sectors in the Sudan	<ul style="list-style-type: none"> · GCF/FAO · Soft Pipeline 	<p>Activities and inputs on adaptation planning and prioritization will be shared.</p>

7. Consistency with National Priorities

Is the Project consistent with the National Strategies and plans or reports and assesments 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

The proposed project is consistent with relevant national and Darfur specific priorities as indicated by several strategies and plans. The Project takes place within the framework of the UNFCCC and National Adaptation Plan (NAP) which established a national coordination mechanism supported by HCENR.

· Sudan's Initial National Communication (INC) was submitted to the UNFCCC in 2003. It recorded that climate change, including decreasing annual rainfall, increasing rainfall variability and increasing average annual temperatures, was causing challenges such as a reduction in ecosystem integrity, a decrease in biodiversity, a decline in crop yields and an increase in disease outbreaks and insect infestations. It identified agriculture, water and health as the highest priority sectors and provided an assessment of the likely impacts of climate change on these sectors. It highlighted the importance of adaptation measures for rain-fed farming and pastoral systems. Similarly, Sudan's Second National Communication (2013) included projections demonstrating that climate change will impact pastoralist and agro-pastoralist livelihoods, notably by affecting water resources. It records that climate change related "drought threatens ... traditional farms, as well as the livelihoods of many pastoral and nomadic groups".

· The National Adaptation Plan of Action (NAPA) process aimed to determine urgent and priority interventions to adapt to climate change. A major focus was on food security by building the adaptive capacities of the rural population, particularly of rainfed farming and pastoral communities. The NAPA process identified 5 distinct ecological zones with high levels of vulnerability[1], one of which covers most of Darfur. The NAPA identified States for initial pilot adaptation activities, and South Darfur was selected for the initial pilot activities, reflecting the improved knowledge base and high interest of the local authorities at that time.

· National Adaptation Plan (NAP) has not yet been approved by parliament. Following from the NAPA process, the NAP process has been a more thorough and strategic process to identify mid and long term adaptation needs, covering all States in Sudan. It focuses upon the agriculture, water and health. The assessments identified clear priorities, actions, and directions for further investment and implementation modalities. The NAP process was highly consultative and science-based. It included significant capacity development at the State level, including the establishment of State level NAP Focal Points, inter-agency NAP Technical Committees and State Adaptation Plans. The proposed Project builds on these institutions in North Darfur. The NAP identifies the following localities in North Darfur as being vulnerable in terms of agriculture, rangelands and water: El Fasher, Komoi, Almalha, Mileet, Umkadada, Um Baro, Karnoy and Alteena. It recommends a list of adaptation measures for natural resources, including: projects to improve natural pastures and livestock production, and improvement of rangeland and livestock production and water harvesting for the purposes of agriculture.

· The Nationally Determined Contribution (NDC) states that Sudan's land use, land-use change and forestry (LULUCF) account for a large proportion of the country's greenhouse gas emissions. Sudan's INDC explicitly links the Government's LULUCF mitigation effort with the national climate change adaptation agenda, as articulated in both its NDC and National Adaptation Plan (NAP). The proposed project will thus contribute to the following goals specified in Sudan's NDC: "Management of the grazing areas and

rangelands in a sustainable manner. Enhancement of enabling environment in order to empower vulnerable communities including through: Improving marketing/markets, supplementary feeding, increased awareness and access to information by vulnerable groups/communities, etc. Improving animal productivity and animal breeds to increase resilience to climate change. Replanting and rehabilitating of vulnerable areas with palatable range species and management of animal routes. Diversification of income generating activities in order to increase adaptive capacity of vulnerable farmers' communities in order to achieve food security/reduce poverty”

· In 2011, the main conflicting parties committed to the Doha Document for Peace in Darfur (DDPD). The DDPD sets out a framework for a comprehensive peace process in Darfur. Subsequently, with support from the international community, a broad and consultative process determined a peace and development vision and strategy for Darfur. The “*Developing Darfur: A Reconstruction and Recovery Strategy*” (DDS) is the principal planning and strategy document for peace and development in Darfur. Its stated aim is “realising short-term and medium-term objectives in the fields of rehabilitation, reconstruction, construction and development taking into consideration urgent needs and the need to work out the basis for long-term development – giving special attention to programmes and projects which will enable Darfur to speed up the transition from relief to development”. The DDS consists of a series of foundational and start-up activities, and then three pillars for medium and long-term development. This proposed LDCF Project contributes to the third pillar, i.e. Economic Recovery. Notably it contributes to the *Programme for Agricultural Recovery, Reconstruction and Development in the Darfur Region* (FAO, 2013) under the DDS.

· The Interim Poverty Reduction Strategy Papers I and II (2011-2016) give importance to development of the livestock sector as a contributor to the overall economy, to exports, and to support small scale and mobile producers.

· The Inter-governmental Authority on African Development (IGAD)[2] and its Initiative to End Drought Emergencies in the Horn of Africa are based upon a detailed assessment of the agriculture sector. The resulting Sudan Country Programming Paper (2014) aims to “improve livelihoods and increase resilience capacities of the different economic sectors of the drought-prone communities in the rainfed and irrigated areas of the country.” The documents recommend 21 outcomes/components with 72 priority interventions in livelihood resilience and economic recovery prioritizing drylands and drought-prone areas and linked to the National Drought Resilience Initiative (NDRI).

· The Developing Darfur: A Reconstruction and Recovery Strategy” (DDS) constitutes the main vehicle for coordinating and mobilising investment, including to pastoralism and agro-pastoralist activities.

· UNDAF 2018 - 2021 Outcome 2, i.e.: “ *By 2021, people’s resilience to consequences of climate change, environmental stresses and natural hazards is enhanced through strengthened institutions, policies, plans and programmes*”.

· FAO’s Country Programming Framework (2017-2020) Priority 3 on Disaster Risk Management and Resilience Building, Output 3.1 “Enhanced Disaster Risk Management (DRM) and Climate Change mitigation and adaptation initiatives focusing on livelihoods and food security” and Output 3.3 “Increased resilience of livelihoods to shocks that impact agriculture, food, nutrition, and economic sustainability”.

· FAO Strategic Objective (SO) 5 and SO2, i.e. “Increase the resilience of livelihoods from disaster” and “Increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner”

[1] Following secession, one of the five lies in what is now South Sudan.

[2] IGAD is an eight country trade bloc of nations in the Horn of Africa and Nile Basin. It was originally developed in response to drought and desertification.

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.

Knowledge management will be an integral part of the project, enabling institutional memory, promoting learning and continuous improvement, generating documents for up-scaling of lessons and best practices. Specific knowledge management activities are incorporated within the project’s components and will be conducted in support of capacity building and training actions under the different components. The broader dissemination of experience and lessons learnt generated by the project will be also pursued through engaging national and regional technical and educational institutions, and regionally and internationally through South-South cooperation mechanisms.

FAO will also take a lead in disseminating knowledge projects regionally and globally. For example, across the near east and North Africa, the FAO regional programme is helping countries to achieve sustainable food security and helping vulnerable communities to cope with shocks and crises. It is notably doing this through several targeted

initiatives on water scarcity, building resilience and nutrition. The proposed Project lessons learnt will feed into these initiatives (as well as benefitting from them). Finally, FAO will ensure that knowledge is circulated at the global level.

Climate change adaptation remains a relatively new sector and much knowledge needs to be acquired, assessed, stored and shared. This needs to happen at the State, national and international levels. Hence this project has activities to contribute to this process. The knowledge management activities are to be planned from the onset and will feed into existing systems for knowledge management. Component 3 includes activities to capture knowledge through the Project activities, including the generation of best practices document and other media supports. The following section explains how that knowledge will then be stored and disseminated at appropriate levels.

At the State level, the Project will build technical capacity of the NAP Technical Committee. The TC is to be mandated with promoting adaptation into the future. It consists of many technical agencies, including the ARC and FNC. Hence, by building the TC capacity, and working with TC members, the Project directly contributes to knowledge management at the State level.

At the national level, the Project is implemented with the NAP framework. All concerned national natural resource ministers are to be involved in following the Project. Notably the knowledge generated by the Project will be disseminated through the HCENR. Moreover, FAO, as an active member of many national committees and network[\[1\]](#), will ensure that all knowledge is appropriately disseminated at the national level.

[\[1\]](#) For example, FAO was recently requested by IGAD to be on the National Committee for Drought Resilience.

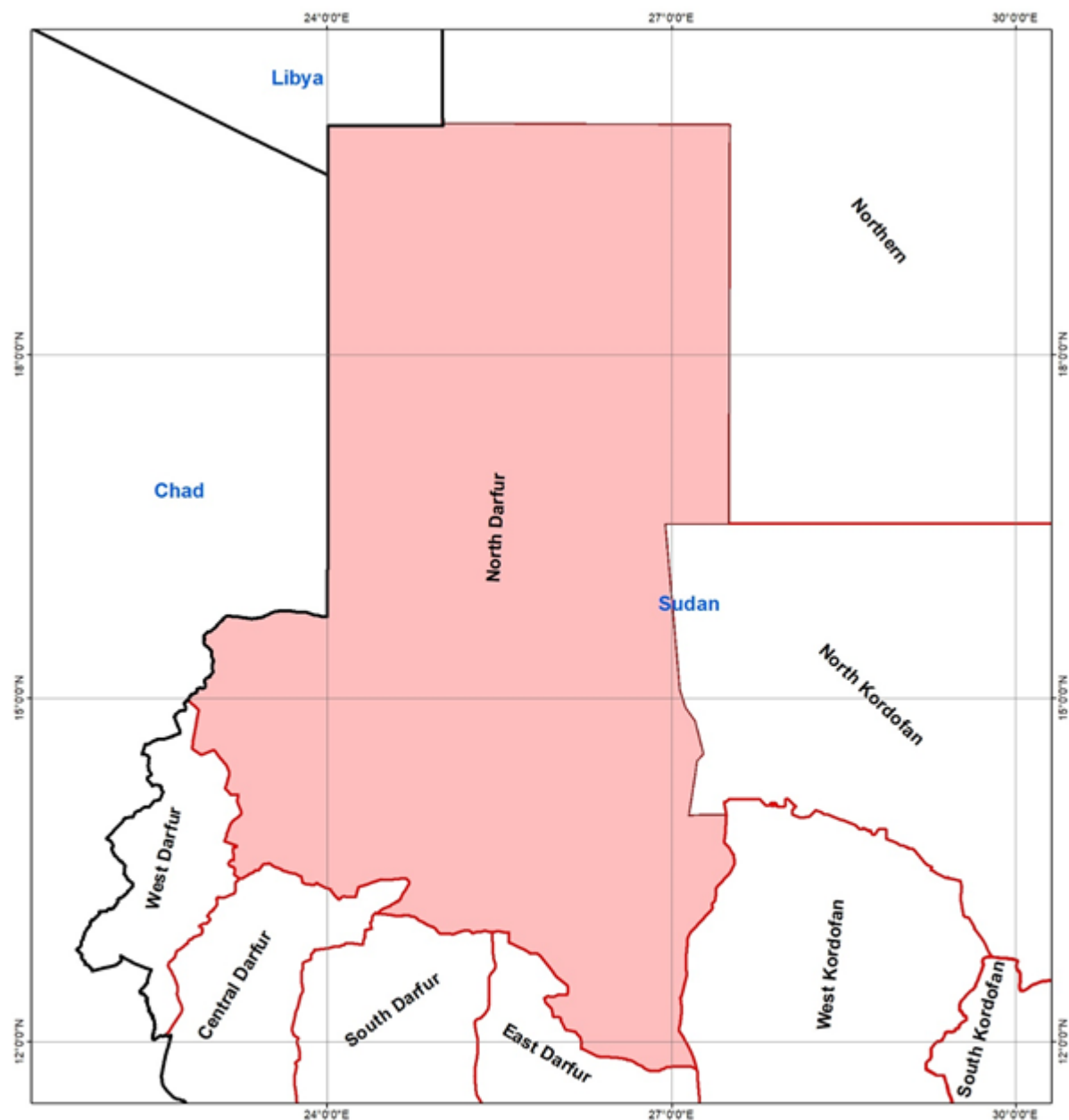
Part III: Approval/Endorsement By GEF Operational Focal Point(S) And Gef Agency(ies)

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	10/9/2019

ANNEX A: Project Map and Geographic Coordinates

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



0 40 80 160 240 320 Kilometers

