



REQUEST FOR CEO ENDORSEMENT/APPROVAL

PROJECT TYPE: Full-sized Project
THE Least Developed Countries Fund¹

Submission Date: 31 October 2014
Re-submission Date:

PART I: PROJECT INFORMATION

GEFSEC PROJECT ID: 5651

GEF AGENCY PROJECT ID:

COUNTRY(IES): Republic of Sudan

PROJECT TITLE: Livestock and Rangeland Resilience Programme

GEF AGENCY(IES): IFAD

OTHER EXECUTING PARTNER(S): Ministry of Livestock, Fisheries and Rangelands (MoLFR)

GEF FOCAL AREA: Climate Change

Expected Calendar	
Milestones	Dates
Work Program (for FSP)	
Agency Approval Date	
Implementation Start	June 2015
Mid-term Review (if planned)	Jan 2019
Project Closing Date	June 2021

A. FOCAL AREA STRATEGIC FRAMEWORK

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative Co-financing (\$)
CCA-1 (select)	Outcome 1.2: Reduce vulnerability in development sectors	Output 1.2.1: Vulnerable physical, natural and social assets strengthened to response to climate impacts, including vulnerability	LDCF	3,363,800	6,345,200
CCA-1 (select)	Outcome 1.3: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	Output 1.3.1: Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	LDCF	3,131,000	12,806,230
CCA-2 (select)	Outcome 2.1: Increased knowledge and understanding of climate variability and change-induced risk at country level and in targeted vulnerable areas	Output 2.1.2: Systems in place to disseminate timely risk information	LDCF	674,500	1,326,500
CCA-3 (select)	Outcome 3.2: Enhanced enabling environment to support adaptation-related technology transfer	Output 3.2.1: Skills increased for relevant individuals in transfer of adaptation technology	LDCF	950,700	5,549,300
Sub-Total				8,120,000	26,072,230
			Project Management Cost ² LDCF	406,000	6,321,770
Total Project Cost				8,526,000	32,349,000

¹ This template is for the use of LDCF projects and SCCF Adaptation projects only. For other SCCF projects under Technology Transfer, Sectors and Economic Diversification windows, other templates will be provided.

² GEF will finance management cost that is solely linked to GEF financing of the project. PMC should be charged proportionately to focal areas based on focal area project grant amount.

B. PROJECT FRAMEWORK

Project Objective: Improve livelihoods and natural assets in livestock-based communities.								
Project Components	Indicate whether Investment, TA, or STA**	Expected Outcomes	Expected Outputs	LDCF/SCCF Financing*		Co-financing*		Total (\$)(*000)
				(\$)(*000)	%	(\$)(*000)	%	
1. Enhanced capacity for community adaptive planning	TA	1.1: Community adaptation plans (CAPs) incorporating needs and priorities of poor women and men.	1.1.2. Community organizations and governmental technical staff at the Local and State levels are capacitated with knowledge, organizational, and management skills on CC adaptation and risk reduction in NRM. 1.1.2. 300 CAPs setting priorities for vulnerability reduction investments developed.	753.20	12	5,549.30	88	6,302.50
2. Vulnerability reduction investments based on adaptive management of NRM	INV	2.1: Community adaptation investments in NRM increase the resilience of settled and nomadic pastoralists.	2.1.1. Priority adaptation measures supporting the restoration and sustainable use of NR implemented in the framework of Community Adaptation Plans. 2.1.2. Diversification of livelihoods achieved through community level income generation activities and businesses.	6,494.80	25.3	19,151.43	74.7	25,646.23
3. Climate change preparedness and policy facilitation	STA	3.1: Response systems and innovative solutions for climate risk mitigation.	3.1.1. A Drought Monitoring, Preparedness, and Early Response System (DMPERS) to mitigate climate risks in rangelands and livestock production is developed and operational in the target States. 3.1.2. A National Sectoral Adaptation Strategy for the Livestock Sector is produced. 3.1.3. Effective conflict resolution measures reduce land disputes between nomadic and settled communities in	872.00	39	1,326.50	61	2,198.50

			the target States.					
4. Project management				406.00	6	6,321.77	94	6,727.77
Total Project Costs				8,526.00		32,349.00		40,875.00

* List the \$ by project components. The percentage is the share of LDCF/SCCF and Co-financing respectively to the total amount for the component, i.e., the percentage for each component will be added up horizontally to 100%.

** TA = Technical Assistance; STA = Scientific & technical analysis.

B. FINANCING PLAN SUMMARY FOR THE PROJECT (\$)

	<i>Project Preparation*</i>	<i>Project</i>	<i>Agency Fee</i>	<i>Total at CEO Endorsement</i>	<i>For the record At PIF</i>
SCCF Grant	73,059	8,526,000	809,970	8,526,000	8,526,000
Co-financing		32,349,000	0	32,349,000	25,000,000
Total		40,875,000		40,875,000	33,526,000

* Please include the previously approved PDFs and PPG, if any. Indicate the amount already approved as footnote here and if the LDCF/SCCF funding is from GEF-3. Provide the status of implementation and use of fund for the project preparation grant in Annex D.

C. SOURCES OF CONFIRMED CO-FINANCING, including co-financing for project preparation (expand the table line items as necessary)

<i>Name of co-financier (source)</i>	<i>Classification</i>	<i>Type</i>	<i>Amount (\$)</i>	<i>%*</i>
IFAD	Impl. Agency	Grant	32,349,000	100 %
Total Co-financing			32,349,000	100 %

* Percentage of each co-financier's contribution at CEO endorsement to total co-financing.

D. LDCF/SCCF RESOURCES REQUESTED BY AGENCY(IES) OR COUNTRY(IES)*

<i>GEF Agency</i>	<i>Fund Type</i>	<i>Country Name/ Global</i>	<i>(in \$)</i>			
			<i>Project Preparation</i>	<i>Project</i>	<i>Agency Fee</i>	<i>Total</i>
Total Resources						

* No need to provide information for this table if it is a single country and single GEF Agency project.

E. PROJECT MANAGEMENT BUDGET/COST

<i>Cost Items</i>	<i>Total Estimated person weeks</i>	<i>GEF (\$)</i>	<i>Other sources (\$)</i>	<i>Project total (\$)</i>
<i>Local consultants*</i>	2016 (1 Natural Resources and Adaptation Manager at National level + 5 Natural Resources and Adaptation Specialists at State level)	356,000	3,999,800	4,355,800
<i>International consultants*</i>				
<i>Office facilities, equipment, vehicles and communications**</i>			2,321,970	2,321,970
<i>Travel**</i>				
Total		356,000	6,321,770	6,677,770

* Provide detailed information regarding the consultants in Annex C.

** Provide detailed information and justification for these line items.

F. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:

<i>Component</i>	<i>Estimated person weeks</i>	<i>GEF (\$)</i>	<i>Other sources (\$)</i>	<i>Project total (\$)</i>
<i>Local consultants*</i>		664,700	2,064,500	2,729,200
<i>International consultants*</i>		125,000	2,095,000	2,220,000
Total		789,700	4,159,500	4,949,200

* Provide detailed information regarding the consultants in Annex C.

G. DOES THE PROJECT INCLUDE A "NON-GRANT" INSTRUMENT? (SELECT)

(If non-grant instruments are used, provide in Annex D an indicative calendar of expected reflows to your Agency and to the GEF/LDCF/SCCF/NPIF Trust Fund)

PART II: PROJECT JUSTIFICATION

A. DESCRIBE ANY CHANGES IN ALIGNMENT WITH THE PROJECT DESIGN OF THE ORIGINAL PIF³

A.1 National Strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAS, NBSAPs, national communications, TNAs, NCSA, NIPs, PRSPs, NPFE, Biennial Update Reports, etc.

NA

A.2 Consistency of the project with LDCF/SCCF eligibility criteria and priorities.

1. This project has been developed in conformity with the LDCF eligibility criteria. The project proposal respects the principle of country ownership having been developed in consultation with national stakeholders, as well as by taking into account all the latest and relevant studies and reports available on climate change adaptation requirements in Sudan. Also, the project has been designed to fully address the priority activities identified by the Government of Sudan in the NAP, NAPA, FNC, and SNC and it has been developed with the aim of ensuring sustainability and replicability beyond project completion. The project design criteria have been respected by including a list and description of the project components as well as by describing the added value of the GEF intervention (additionality). The GEF component will build directly on past and ongoing investment projects from IFAD and other agencies, and it will complement activities and achievements in light of the expected impact of climate change. Co-financing requirements are satisfied and cost-effectiveness aspects have been carefully considered. The project will be mainly investment-oriented and aims at encouraging replication and scaling-up at national level.
2. **LDCF Added Value Compared to the baseline:** The GEF/LDCF funding represents an opportunity to increase the scope of the rural development objectives pursued through the LMRP in light of the expected negative impact of climate change on the already fragile livestock and rain fed agriculture sector in Sudan. The LDCF contribution will cover the incremental cost related to the production of the adaptive and participatory community plans (CAPs), the capacity building work needed for their development and implementation of the CAPS, the investments for adaptation and vulnerability reduction, and the enhanced preparedness to climate risk, both at field level (Drought Monitoring, Preparedness, and Early Response System) and through the policy dialogue at the Federal and States level.
3. Without the LDCF funding, the baseline intervention could turn out to be a “business-as-usual” livestock support development project, and not tackle the root causes of the most important climate-related constraints facing rural development in Sudan. The LDCF intervention will complement IFAD’s baseline programme by introducing an innovative participatory planning process involving smallholder farmers, pastoralists and other natural resource users in the development of Community Adaptation Plans (CAPs) aimed at strengthening resilience, reducing vulnerability, increasing productivity and conserving or restoring the natural resource base. This will be followed by the implementation of investment plans for adaptation and vulnerability reduction technologies and management systems, based on the priority measures identified by the communities through the planning exercise.
4. In addition to the adaptation benefits required under the LDCF, the project will contribute a number of other environmental co-benefits at the local to global levels. Notably, any improvement in rangeland management will protect below ground carbon stores, contributing to climate change mitigation. The restoration of degraded pastures and woodlands will significantly improve soil carbon stocks and reduce CO₂ emissions to the atmosphere. This will furthermore protect biodiversity in agro-forestry ecosystems, and reduce the risk of desertification.
5. The LDCF project is fully aligned with the CC Strategy of IFAD that aims to maximize impact on rural poverty in a changing climate through: (i) innovative approaches helping smallholder producers build their resilience to CC; (ii) availability of incentives and funding for herders and smallholder farmers to shift to climate-resilient production systems; (iii) an informed and more coherent dialogue on CC, rural development, the livestock

³ For questions A.1 – A.7 in Part II, if there are no changes since PIF and if not specifically requested in the review sheet at PIF stage, then no need to respond, please enter “NA” after the respective question.

sector and food security. Through the LDCF project climate change will be factored into IFAD's operating model in Sudan, incorporating climate resilience of the rural poor in the overall goal of the LMRP baseline.

6. **Consistency of the project with national/regional priorities/plans:** Sudan was a party to the Earth Summit in 1992 and committed itself to its recommendations and decisions. In the same year, Sudan signed the United Nations Framework Convention on Climate Change (UNFCCC). Hence, an enabling activity for climate change was funded by the Global Environment Facility (GEF) and UNDP, and implemented by the Higher Council for Environment and Natural Resources (HCENR), which was a precursor to the National Adaptation Plan of Action (NAPA) for Sudan. Sudan also signed and ratified the International Convention on Biological Diversity (CBD) and received funding for the preparation of National Biodiversity Strategy and Action Plan (NBSAP). Sudan also signed and ratified the United Nations Convention to Combat Desertification (UNCCD) and prepared a National Action Plan to combat Desertification. Sudan also ratified the Kyoto Protocol as well as Cartagena Protocol on Biosafety and the Stockholm Convention on Persistent Organic Pollutants.
7. The proposed LDCF intervention builds on the findings, and is closely aligned with recommendations of the NAPA prepared in 2007 by the Ministry of Environment and Physical Development. It integrates key recommendations for adaptation activities in agriculture and water resource management and is fully relevant with the priority projects identified by the NAPA, and mainly: Community-based rangeland management and rehabilitation; Drought early warning systems for disaster preparedness and; water and soil conservation measures. The intervention is also aligned with the FNC to UNFCCC (2003), SNC to UNFCCC (2014), and is based on the priorities and recommendations of Sudan's Long-Term Strategy 2007-2031 and its second Five-Year Development Plan (2012-2016), the Poverty Reduction Strategy Paper (PRSP), the Agriculture Revival Programme (ARP), and the Interim-PRSP approved by the Parliament in 2012, which provides the basis for the full PRSP that is currently under preparation. The project also perfectly responds to the priorities identified in the Draft NAP that is already developed in Sudan, which is being planned based on State vulnerability and adaptation assessments and hotspot maps, and calls for the development of early warning systems and suitable technology that can build on the vulnerability assessments carried out within the NAP exercise to forecast the impact of future climate change on rangelands and natural resources, and inform the elaboration of livestock emergency response plans.
8. The Ministry of Livestock, Fisheries and Rangelands (MoLFR), which is the designated Lead Programme Agency, played a pivotal role in the development and design of the LDCF project. Representatives of MoLFR actively participated in the workshops and field missions that helped shape the project, providing input on the priorities and requirements on CC adaptation and NRM identified through previous strategic exercises.

A.3 The GEF Agency's comparative advantage

9. IFAD is the largest financier of rural and agricultural development in Sudan, with three decades of experience in supporting community-driven development in fragile and conflict-affected environments. Its comparative advantage is based on: (i) its long-term partnership with the government; (ii) its ability to identify and focus on diversified and systemic development challenges across the country; (iii) its ability to engage stakeholders at local State and Federal level; (iv) a well-developed framework of supervision and implementation support. The IFAD country programme consists of six on-going projects and programmes representing US\$ 143.5m in loans and grants of which US\$ 89.9m is provided by IFAD and US\$ 53.6m by domestic and external co-financiers. These activities are spread across the country and include integrated community development, rural infrastructure, improved crop productivity and pro-poor export commodities. The total outreach is estimated at 1.4 million. IFAD is increasingly involved in CC adaptation, vulnerability reduction, and NRM work in Africa and at the global level, and its knowledge management framework enables and effective and prompt application of lessons learned and best practices to new interventions.

A.4 the baseline project and the problem that it seeks to address

10. The Livestock Marketing and Resilience Programme (LMRP), the baseline for the LDCF intervention, will support the Government's priority to convert the livestock sector from passive accumulation to a more productive and sustainable business-oriented mode. LMRP will seek to tackle intractable poverty by raising the incomes of poor households through the transformation of the rural economy from subsistence to an increasingly efficient market-based system, in particular the small-scale livestock sector. LMRP shall indicatively start in 2015 for a period of 7 years. The programme's objective is increased livestock productivity, value addition and marketing. Key outcomes will include improved animal health and access to animal health services and increased marketing of primary and secondary livestock products. The GEF/LDCF funding represents an opportunity to increase the scope of the objectives pursued through the LMRP in light of the expected negative impact of climate change on

the already fragile livestock and rain fed agriculture sector in Sudan. The LDCF contribution will cover the incremental cost related to the production of the adaptive and participatory plans, the capacity building work needed for their development and implementation of the CAPS, the field investments for adaptation and vulnerability reduction, and the enhanced preparedness to climate risk, both at field level (Drought Monitoring, Preparedness, and Early Response System) and through the policy dialogue at the Federal and States level. Without the LDCF funding, the baseline intervention could turn out to be a “business-as-usual” livestock support development project, and not tackle the root of the most important constraints facing rural development in Sudan.

Project rationale

11. Rangelands cover about 46% of the total area of Sudan. They encompass different ecological zones extending from desert and semi desert in the north, to low and high rainfall savannah in the south parts. The rangelands of Sudan contribute to significant income and subsistence of large sector of the population and provide more than 80% of the total feed requirements of the national herd, playing a vital role in soil and watershed protection, biological diversity, ecological balance and environmental conservation.
12. Over the last three decades, the rangeland cover in Sudan has been severely degraded, particularly in semi-arid areas. This deterioration is attributed greatly to the expansion in agricultural activities and seasonal fires, and to the impact of desertification caused by the combined effect of unsustainable management practices and an aridification trend in climate. Most of the rangeland management approaches adopted so far were developed under the concept of increasing and sustaining livestock production by decreasing the inherent variability associated with rangelands and grazing. This rangeland management approaches are incapable of providing an ecological framework for alternative management objectives that have become more important recently especially under climate change forecasts. Furthermore, the traditional balance between pastoralists, agro-pastoralists and crop farmers has been altered significantly in recent times, and disputes over the ownership and use of the dwindling natural resources are widespread and increasing. The customary practice of allowing nomads to graze crop residues after the harvest has mostly disappeared and herders are often expected to pay lease-holding tenants for grazing and access to water. An additional problem is the degradation of the animal routes, which have narrowed (100/150 m in width) and are bare with very few rest places.
13. The IPCC Fourth Assessment characterized Sudan as a “Hotspot of key future climate impacts and vulnerabilities in Africa”. The climate scenario analyses conducted as part of the preparation of the First and Second National Communications (FNC/SNC) indicate that average temperatures are expected to rise significantly compared to baseline expectations, while rainfall is bound to become more unpredictable, with an increase of extreme events such as floods and wind, and sandstorms. The forecasted changes pose an immediate and direct threat especially to the communities of poor rural pastoralist and agro-pastoralist that rely upon increasingly erratic rainfall and rangelands threatened by degradation and desertification. Increased temperatures and declining rainfall have shifted the boundary between desert and semi-desert zones south by 50-200km over the past 80 years. The combination of increased climatic shocks, policies that hinder mobile pastoralism, and a lack of other viable livelihood options are posing an increasing threat to the livelihoods of pastoralists. These trends put pastoralism on the frontline of climate change. The availability of ecologically healthy and climate resilient rangelands is even more important in the light of the fact that the traditional balance between pastoralists, agro-pastoralists and crop farmers has been altered significantly in recent times, and disputes over the ownership and use of the dwindling natural resources are widespread and increasing.
14. An environment and climate change assessment (ECCA) for Sudan was carried out by IFAD in July 2013. The study analyzed environmental and climate change challenges and opportunities affecting local communities and produced recommendations to enhance the sustainability of IFAD’s investments in the agriculture and rural development sector. Vulnerability maps were produced., overlaying the generated vulnerable areas to climate change with population distribution, soil productivity map, food insecure areas together with areas which have potentialities for increasing agricultural productivity and areas with high vulnerability to natural disasters. This exercise generated priority areas for IFAD interventions. The outcomes and recommendations of the ECCA have informed the design phase of this GEF/LDCF intervention, as well as the baseline programme LMRP.
15. The responses of the Government of Sudan to climate change are predominantly focused on: (i) infrastructure investment, in particular to control flooding; and (ii) policy and planning including assessment of climate change impacts on agriculture, integration of climate change into planning and policies; and (iii) the development of projects for mitigation and adaptation, including both ‘hardware’ adaptation measures to protect assets and infrastructures, ‘software’ interventions to build local capacity for adaptation and enhanced resilience of vulnerable communities to climate risk. The GEF/LDCF intervention has been designed with the full involvement

of the Sudanese Authorities, and meets several recommendations and priorities identified in key policy documents such as the Second National Communication (SNC) to UNFCCC and the National Adaptation Plan (NAP).

16. The rationale behind the proposed GEF/LDCF project is to mainstream the CC adaptation priorities of the government into the community-driven and gender-balanced solutions for rural investments, livestock production and marketing established by previous IFAD programmes and scaled up through the Livestock Marketing and Resilience Programme (LMRP). This will help address in a holistic way the major constraints to sustainable rangeland management in the target areas: (i) weak skills and knowledge of rural population and gender inequalities; (ii) poor technologies and infrastructures in the livestock value chain; (iii) limited access to markets; (iv) limited access to appropriate rural financial services; (v) water scarcity, misuse of the limited water resources, and soil and environmental degradation, and (vi) projected impacts of climate change.
17. The GEF/LDCF project will be concentrated on the heartland of the semi-arid livestock producing areas in the south of Sudan, building on the activities of previous and on-going initiatives in five contiguous States: West Kordofan, North Kordofan, White Nile, Sennar and Blue Nile. The project will work in 300 clusters of villages in 16 contiguous localities, which have been selected on multiple criteria, including poverty and vulnerability to climate change and climate-related risk. The primary beneficiaries of the GEF/LDCF project will comprise those economically marginalised and excluded households residing in pastoralist and agro-pastoralist communities who: (i) have inadequate incomes from all sources to support a decent standard of living, and (ii) are potentially mostly affected by, and vulnerable to the impact of climate change.
18. The proposed project will adopt an integrated approach combining the design and implementation of community adaptation plans with enhanced preparedness to climate risk, responding to the need identified through national policy processes for the introduction and piloting of innovative response systems that contribute to reducing the vulnerability of poor herders and farmers to the increasing economic and social threat posed by climate change and environmental degradation. It will mainstream CC adaptation needs into infrastructure designing, spatial planning and livestock management practices, and help disseminate them among the most vulnerable population living in areas with high CC risk, with a special focus on women and youth. The gender focus will be addressed through mainstreaming gender in the project targeting as well as specific gender initiatives such as awareness raising, targeted education and training, institutional development, reducing barriers for women's participation, and promoting women-led micro-enterprises for income generation.
19. The GEF/LDCF intervention will be a blended project, fully integrated into the IFAD-supported Livestock Marketing and Resilience Programme (LMRP). The GEF/LDCF funding represents an opportunity to increase the scope of the objectives pursued through the LMRP in light of the expected negative impact of climate change on the already fragile livestock and rain fed agriculture sector in Sudan. The LDCF contribution will cover the incremental cost related to the production of the adaptive and participatory plans, the capacity building work needed for their development and implementation of the CAPS, the field investments for adaptation and vulnerability reduction, and the enhanced preparedness to climate risk, both at field level (Drought Monitoring, Preparedness, and Early Response System) and through the policy dialogue at the Federal and States level.
20. The proposed LDCF interventions will take advantage and make use of the proven mechanisms for community participation, such as village development committees, training of trainers approach, multi-stakeholder fora, exposure visits, and learning tours to promote debate and cross-fertilization, and to reach a common understanding of needs and solutions. Since 1979, IFAD has funded 19 projects in Sudan, for a total cost of USD 596.2 million, of which 42% were IFAD loans, reaching 455,500 poor households (some three million people). With an integrated rural development approach, IFAD's focus has been on the main following thematic areas: (i) capacity building of producer's organizations; (ii) access of poor rural people to markets and microfinance services; (iii) access of poor rural people to agricultural services (input supply and technical advice); (iv) strengthening of community-based organizations; (v) natural resource management and conflict resolution; and (vi) access to social services.
21. Previous IFAD funded projects have demonstrated that community-driven, area-based development programmes can successfully reduce poverty and food insecurity while empowering targeted rural communities and their women members in particular. A successful characterisation of IFAD-financed operations in Sudan and elsewhere has been the inclusion of innovative pilot operations with potential for scaling up, including privatisation of veterinary services, livelihood diversification and partnerships with financial institutions, and natural resource management PPPs. Specifically, the IFAD funded community-based projects on rural development, natural resources management and infrastructure construction (ILMP, WSRP) are considered to be flagship models for community development. The community organizations established by these projects have given a voice, for the first time, to hundreds of thousands of poor rural women and men, empowering

vulnerable groups (particularly the poor and women), helping them to participate in, and gain benefits from the project interventions. Their community-led and gender-balanced extension models are recognized as an effective and sustainable mechanism for livestock services. These projects have addressed a range of development challenges (knowledge and skills, financial services, infrastructure, access to input and output markets, women's empowerment) in parallel with complementary interventions on water and land management that have created a virtuous cycle and a dynamic rural economy.

22. LDCF funding for Sudan is designed to be catalytic for scaling-up adaptation to climate change. The input of LDCF funding will translate into: (i) more sustainable land management, higher agro-ecosystem productivity and more diversified rural economy through more sustainable, integrated livestock/agriculture systems and techniques and ecosystem-based restoration of rangelands; (ii) improved access to CC adaptation knowhow through the development of an effective and sustainable Drought Monitoring, Preparedness, and Early Response System (DMPERS); (iii) increased preparedness thanks to the production of a National Sectoral Adaptation Strategy for the Livestock Sector, and the reduction of disputes between nomadic and settled communities regarding access to natural resources in the target areas.

A.5 Incremental/Additional cost reasoning: describe the incremental (GEF Trust Fund/NPIF) or additional (LDCF/SCCF) activities requested for GEF/LDCF/SCCF/NPIF financing and the associated global environmental benefits (GEF Trust Fund) or associated adaptation benefits (LDCF/SCCF) to be delivered by the project.

23. The GEF project represents an opportunity to increase the scope of the poverty reduction and food security objectives pursued through the IFAD LMRP baseline programme in light of the predicted negative impacts of climate change on the very fragile natural resources on which the livestock sector depends. The GEF financing will aim at increasing the climate resilience of natural resources – rangelands and woodlands - through sustainable management practices and ecological restoration techniques, an enhancing the adaptive capacity of pastoralist and agro-pastoralist communities and other value chain actors to address climate risks, benefiting a total of 100,000 households in about 1,000 villages in 5 States.
24. The actual numbers of investments and balance of activities will derive from the CAPs. However, an estimate of the adaptation benefits produced by the GEF project interventions through the implementation of the 300 CAPs is the following: by the end of the project would have restored 334,500 ha of rangelands and woodlands, constructed about 15000 km of firebreak lines, implemented sand fixation in about 1,200 km, improved soil and water management in about 12,000 ha of mixed tree-livestock-cropping systems, increased the water harvesting capacity by about 516,000 cubic meters, and to introduce about 1,200 LPG improved cook stoves (ICS) and 12,000 ICS based on improved wood consumption.
25. The project adaptation benefits will also have a national-wide impact at the policy level, through the production of a National Adaptation Strategy for the Livestock Sector, and through the development of a Drought Monitoring, Preparedness and Early Response System (DMPERS) to inform the territorial planning of new investments on water and fodder enhancement needs, especially along the migration routes, monitor seasonal/daily changes in water availability and pasture conditions, help plan migratory movements based on the availability of water and pasture, and facilitate early warning access to critical information about drought-related risks through media information and communication technologies (MICT) such as SMS message services to support decision-making in the sanitary and veterinary sector, and in trading operations between pastoralists and markets.
26. The implementation of 300 Community Adaptation Plans (CAPs) integrating climate adaptation priorities based on vulnerability assessment will enable the target 100,000 HH to participate in the planning of their own development. Users' associations, including women and youth associations, with responsibility for operation and maintenance of water harvesting equipment and infrastructures, for marketing fodder resources, for restoring natural resources, for promoting small scale businesses, and for supporting the spread of renewable energy equipment for cooking will be established.

Table 2 - Expected adaptation benefits from LDCF activities

LDCF Activity	Expected Adaptation Benefit
Rangelands and woodlands restoration and	<ul style="list-style-type: none"> • Increased fertility and carbon sink effect in improved rangelands, woodlands and mixed tree-crop-range systems; • Increased biomass and rangeland productivity by 25% in target areas;

sustainable management	<ul style="list-style-type: none"> • Reduced wood consumption, CO2 emissions, and pollution through improved cook stoves; • Reduced evaporation, run off and sedimentation; • Increased biodiversity and improved control of invasive species; • Improved natural regeneration; • Prevented sand encroachment and break-up of hard soil crusts.
Climate-proof water harvesting and management systems	<ul style="list-style-type: none"> • Generation of jobs and a range of auxiliary business in the livestock value chain (e.g. workers supplying auxiliary markets such as water for livestock through the management of water points and truck transportation to grazing grounds); • Increased water availability, reduced water losses, and reduced risk of vector-borne diseases affecting livestock and people through the use of climate-proof water harvesting technologies • The use of innovative portable water bags (filled by a commercial cistern truck) strategically placed enables animals to exploit unreachable good-quality pastures.
Climate-resilient mixed tree-crop-fodder production systems, based on soil and water conservation management practices (e.g. conservation agriculture; Vallerani system)	<ul style="list-style-type: none"> • Increased soil fertilization by improving content of organic matter and fixing nitrogen through the tree roots; • Increase by 50% of crops and fodder yields; • Significantly higher soil moisture in the crop root zone through permanent vegetation and mulch cover that can reduce crop water requirements by 30%; • Soil erosion reduction by 60-90% in the intervention areas; • Generation of jobs and a range of auxiliary business in the livestock value chain (e.g. farmers supplying auxiliary markets such as fodder/crop residues; workers in feedlotting), with special focus on women and youth; • Reduced workload of women as a result of improved farming systems, water harvesting and improved cook stoves, with more time available for education, training, and the development of small businesses.
Income diversification through a mixed economy based on livestock-cropping-NWFP production and marketing	<ul style="list-style-type: none"> • At least 30,000 households would start income-generating activities and approx. 5,000 micro- and small-scale enterprises on climate-resilient economic activities identified in the CAPs. • Higher and more diversified income from livestock production combined with sales of NWFP (honey, leaf products, gums, resin) and engagement in complementary activities (watering and fodder marketing; rangeland and woodland restoration); • Diversified livestock-cropping-NWFP production system that may buffer against income risk associated with climate variability.
Restoration of stocking routes	<ul style="list-style-type: none"> • 1,100 km of demarcated stoking routes with restored, positive interactions between herders and farmers on a seasonal basis along the stocking routes (e.g. livestock manure of harvested fields; livestock feeding on crop residues; clear demarcation of livestock routes and seasonal movements); • Compensated livestock mobility restrictions due to socio-political problems and climate-risks with increased water and fodder availability along stocking routes; • Diversified economy of beneficiary households/villages thanks to the revitalisation of trade and businesses focused on the provision of goods and services to the pastoralists using the stocking routes.
Adaptive capacity of pastoralist and agro-pastoralist communities and livestock VC actors	<ul style="list-style-type: none"> • The members of the 300 Village Development Committees (VDCs) and 126 governmental technical staff at the Locality and State levels are capacitated to steer the process with knowledge, organizational, and management skills on CC adaptation, CRR and NRM. • The members of about 1,000 villages are enabled to assess CC impacts, and identify priority adaptation measures, incorporating traditional knowledge and gender-related specificities, to form the basis of 300 CAPs. • Livestock value chain actors are aware of the Drought Monitoring, Preparedness and Early Response System (DMPERS) developed by the project, and receive timely information about water and fodder conditions to better plan migration movements, requirements for additional water and fodder supply during drought, and production and marketing needs.
Gender and youth inclusiveness	<ul style="list-style-type: none"> • Minimum quotas established to ensure participation of women (at least 50%) and youth (at least 40% men and women younger than 30 years). • GEF & baseline programme staff and service providers trained on gender and CC issues; The project will organize groups of producers, with emphasis on women/youth groups. Females would be targeted through women and rural development structures as these institutions facilitate independent access to land, farm equipment, credit and training for their members.

A.6 Risks, including climate change, potential social and environmental risks that might prevent the project objective(s) from being achieved and outline risk mitigation measures

27. The evidence for climate change is incontrovertible in Sudan, with the desert margin advancing year-by-year, increasingly erratic rainfall patterns and more extreme weather events. Even small changes in the predictability of animal feed and water supplies can take marginal producers out of business. In addition for the livestock sector, the 2011 separation of South Sudan has disrupted important traditional transhumance arrangements and reduced significantly the capacity of pastoralists to cope with seasonal and other variations in rainfall. While yield-enhancing inputs and technologies have been fairly applied in Sudan's irrigated agriculture, production in the vast rainfed sector has mainly depended on the natural base of available land and natural water sources from rainfall and seasonal rivers and streams. These being under threat and badly managed pose a very high risk to the livelihoods of the smallholders and the rural poor.

28. The main potential risks threatening the LDCF intervention can be grouped under the following categories

- A policy environment not amenable to enhancement;
- Significant civil unrest and natural disasters in the project area;
- Risks stemming from social norms and existing behaviours, and low level of buy-in from the final beneficiaries.

Table 3 - Risks and proposed mitigation measures

Risk	Rating	Proposed Mitigation Measures
Coordination among Federal and State agencies is often problematic and their capacities are limited.	Medium	The intervention will contribute to addressing these issues through a sustained capacity building and engagement effort, seeking a balanced participation of the Federal, State, and locality levels. Policy dialogue will give priority to emphasising the criticality of increased commitment to transhumant livestock raising and NRM to decrease climate change vulnerability, increase productivity, generate government revenues, and contribute to food security.
The volatile policy environment can make implementation difficult if projects are not flexible and responsive.	Medium	The project will be monitored closely during mid-term reviews and supervision missions and adjustments made accordingly.
Conflict and natural disasters: the project areas are vulnerable to conflict and natural disasters such as floods and droughts, which have the potential to delay and disrupt implementation and erode progress made towards the LDCF objectives	High	This risk will be mitigated by supporting inclusive governance, emphasizing participation, gender neutrality, decentralization, transparency and accountability, and by targeted investments. Natural disasters and climate threats will be addressed by: (i) providing support for development of policy, local knowledge, capacity, and awareness raising on climate issues; (ii) investing on adaptation and resilience measures; and (iii) building disaster preparedness and response into the design and implementation of the CAPs.
The participatory approach that drives the intervention is highly dependent on the quality of the staff deployed in the field teams, the provision of adequate incentives and the participation of women in the process. Cultural traditions may prejudice the project's attempts to give women a greater voice, while landowners may resist engaging in a dialogue with livestock herders.	Medium	The intervention will build on effective and efficient project management units established during the previous IFAD projects. The trust and relationships built with communities would increase the likelihood of success in achieving the project's objectives. The approach of seeking win-win situations with investments that can clearly benefit all concerned users will be an incentive for dialogue and conflict resolution among different segments of the rural communities.
The CAPs fail to capture and prioritise measures for climate change adaptation and vulnerability reduction due to low awareness of the communities.	Low	The SDAT and TA will ensure that climate adaptation, DRR, and ENRM capacity is built in the communities from the early stage of the process. Use of specialist teams to provide intensive support to a manageable number of target communities in negotiating and implementing CAPs. Implementation through existing structures and experienced partners.

The drive towards agreed outcomes, particularly the improvements to shared NR assets to ramp up productivity, is subverted by old habits of dependency that concentrate attention on immediate material benefits.		Interventions are based on proven approaches and/or upscale
Poor maintenance of investments and governance conflicts result in reduced benefits to herders and farmers.	Medium	Creation of robust management and budgetary arrangements for all communal assets and remediated rangelands.
The project fails to capture the interest of final users at the community level.	Low	Stress key strategies such as awareness raising, working closely with the communities to build their capacity coupled with ensuring that economic incentives are well developed, and emphasis on sustainable additional incomes in prospect.
The project fails to expand women's access to and control over fundamental assets.	Low	The Programme is specifically targeting women groups to enhance their access to capital, physical assets, support services and knowledge. Assets accumulated under the Programme will be owned by women groups to enhance equitable access by all women, including the poorest, and the protection of their access from usurpation.

A.7 coordination with other relevant/GEF financed initiatives

29. IFAD will coordinate with other UN agencies working on climate change adaptation and NRM in the country, especially FAO, UNEP, UNDP and WFP. Contacts and exchanges of information with these agencies have already taken place during the project design phase.
30. The project will also coordinate with other regional donors including the Islamic Development Bank (IsDB) and African Development Bank (AfDB). Discussions are currently underway with China Africa Agriculture Investment Company (CCAIC) to develop synergies and explore co-financing opportunities in both livestock and the seed thematic areas with a public-private partnership model in mind. Similar discussions have been started with the Arab Authority for Agricultural Investment and Development (AAAID).
31. The LDCF intervention will complement other relevant GEF-financed initiatives in Sudan, namely the project "Climate Risk Finance for Sustainable and Climate Resilient Rainfed Farming and Pastoral Systems" initiated by UNDP in 2012, the regional project "GGW Sahel and West Africa Programme in support of the Great Green Wall Initiative", the project "Implementing NAPA Priority Interventions to Build Resilience in the Agricultural and Water Sectors" implemented by UNDP, the project "Sudan Sustainable Natural Resources Management Project (SSNRMP)" implemented by the World Bank, the project "Enhancing the Resilience of Communities living in CC Vulnerable Areas of Sudan, using Ecosystem-based Approaches to Adaptation", which is currently under preparation by UNEP and HCENR and the Regional (Sudan, Somalia): Rural Livelihoods' Adaptation to Climate Change in the Horn of Africa -Phase II (RLACC II) project being prepared by AfDB. The project team will invite representatives of the different GEF-funded projects and other relevant initiatives to the start-up workshop, to help identify complementarities and avoid duplications.
32. As the rangeland restoration and management work proceeds, the project will liaise closely with the GEF/IFAD "Integrated Carbon Sequestration Project in Sudan", which is being implemented in the Butana region by IFAD in partnership with FNC. IFAD and FNC will assess the developments, capacity created, and lessons learned through the project, and will evaluate the opportunity to introduce a carbon finance component that could enable the GEF/LDCF beneficiaries to access the voluntary carbon market and receive additional income for carbon sequestration activities, thus bringing additional value to the investments of the project.

B. ADDITIONAL INFORMATION NOT ADDRESSED AT PIF STAGE

B.1 Describe how the stakeholders will be engaged in project implementation.

Project Implementation Arrangement

Project coordination and supervision

33. IFAD will be responsible for the coordination and supervision of LDCF, in accordance with GEF standards and procedures. The LDCF will be implemented as an integrated component of its baseline programme LMRP, under the leadership of the Ministry of Livestock, Fisheries and Rangelands (MoLFR). The MoLFR shall have the overall responsibility for the implementation of the project and shall ensure linkages to other relevant Ministries, States and Agencies. MoLFR will have overall oversight of LDCF as part of the larger LMRDP programme through the **Programme Management Unit (PMU)** in Kosti. To ensure that each state mobilises and develops the necessary capacity for the coordination and implementation of Programme activities, five **State Implementation Units (SIU)** will be established. The SIUs will be established in the SMAARIs at Singa (Sennar State), Damazin (Blue Nile), and El Obeid (North Kordofan) and in the State Ministry of Livestock Fisheries and Rangelands at Kosti (White Nile), and El Fula (West Kordofan).
34. LDCF funding will cover the salary of a full-time **Natural Resources & Adaptation Manager (NRAM)** will be appointed to lead the implementation of the project. The NRAM will be part of the LMRP Programme Management Unit, he/she will report to the Programme Director of the PMU and will liaise closely with the other members of the Unit, as appropriate. IFAD will also cover the cost for the hiring of five **Natural Resource & Adaptation Specialists (NRAS)**. The NRAS will be based in one of the five State Implementation Units (SIU), they will report to the NRAM, and will lead the work of the **State Development & Adaptation Teams (SDAT)**, which will include appointed specialists from the State administration in the fields of rangeland/pastures, forestry, agriculture, water, and gender & social welfare. The SDAT will have the following tasks: (i) guide and oversee the production of the CAPs; (ii) facilitate the participatory selection of priority investments with the VDCs; and (iii) deliver tailor-made community training and capacity building programmes to enable the beneficiaries to design and implement the planned activities, including facilitating access to financial services for the implementation of the CAP priority investments.
35. The project will contract TA for the preparation of the CAPs. The TA will be made available through service providers (NGOs, CBOs, partner organisations) who will make sure that the CAPs are produced and finalised within the first 12 months of implementation. With respect to the completion of the stock route network, TA will be provided to support the five states in undertaking GIS mapping and demarcation of the stock routes as well as legalisation. Regarding Component 3, LDCF will contract an international provider of TA to develop the Drought Monitoring, Preparedness & Early Response System (DMPERS) and deliver the necessary training for its management and maintenance.
36. The NRAM will play a pivotal role in supporting Ministry in the production of the National Sectoral Adaptation Strategy for the Livestock Sector, ensuring coordination with the relevant government agencies, both at central and state levels while working closely with the Ministry of Environment. TA will be procured for the preparation of the strategy. The NRAM and NRASs will support the State authorities in the design, organisation and implementation of the State-level workshops for facilitating land dispute settlement, including user and access rights. The Programme will also appoint professional, neutral facilitators to run the workshops.
37. All staff members will be recruited on a competitive basis in compliance with IFAD's procurement guidelines and the Sudanese labour law. The PMU staff will assist the NRAM and will ensure that the overall LDCF project M&E system is in place and operational, supporting the collection of M&E data and the preparation of reports in accordance with the annual work plans and GEF/IFAD requirements, and in full integration with the existing IFAD M&E system.
38. The **Programme Steering Committee (PSC)** set up for LMRP will orient the strategy of the project, overseeing planning, reviewing progress and impact, and ensuring linkages with related projects, government services and relevant stakeholders. The PSC shall be chaired by the MoLFR and shall meet at least twice a year. The PSC will meet every quarter and will comprise: the Under Secretary of MoLFR as Chairperson; the Under Secretary of Ministry of Agriculture and Forestry; the Under Secretary of Ministry of Finance and National Economy; the Director-Generals of SMAARI of North Kordofan, Blue Nile, White Nile, and Sennar States; a representative of the Sudan Veterinary Council; and the Secretary General of the Pastoralists Union.
39. In each of the States, LDCF implementation will be supported by a **State Steering Committee (SSC)** set up in the framework of the LMRP implementation arrangements. The SSC will be responsible for facilitating implementation and ensuring that impediments to the implementation of project activities are eliminated, as well as reviewing progress. Secretariat services to the SSC will be provided by the corresponding SIU.

40. A **project implementation manual** will be prepared as part of the project start-up activities, to assist the Project team with guidance for planning, implementing and monitoring the project activities, the procurement of technical assistance and services, and the project investments. The project implementation manual will follow the same conditions of IFAD's operations in Sudan. The manual will define procedures, criteria and procurement conditions for the project matching grants, addressing climate resilience and gender requirements. Grant funding will facilitate the generation and introduction of innovative technologies and will support the delivery of environmental services. All international and national providers of services will have to apply for competition by fulfilling specific criteria defined in the IM. The Quality and Cost-based Selection (QCBS) procedures will be used for procuring these consulting services.
41. **Supervision.** The project will be directly supervised by IFAD. Direct supervision is perceived and will be applied as a continuous process that requires ongoing communication and engagement with Government and PMU/SIU management. Direct supervision will encompass three areas: (i) finance administration, ensuring fiduciary compliance, with focus on legal conditions, financial management and disbursements, and procurement and contracting; (ii) programme supervision, assessing implementation performance, with focus on overall implementation performance and progress towards objectives, programme investments, activities and outputs, statutory requirements (AWPB, monitoring, reporting), steering, management, implementing institutions, targeting and gender mainstreaming; and (iii) implementation support.
42. Implementation support will be applied at three levels: (i) programme level: with focus on providing guidance towards achievement of objectives, supporting adaptation in response to evolving conditions, creating systems for sustainable flow of benefits, resolving operational issues and problems, generating lessons and articulating best practices; (ii) country level: with focus on introducing a broad programmatic view of development investments, influencing policy on the basis of operational experiences, developing systems and institutions for poverty reduction, facilitating financial and operational partnerships; and (iii) IFAD level: with focus on generating knowledge and lessons, feeding operational lessons into new programme design, creating innovative instruments, investments, pilot activities, and enabling portfolio restructuring to improve outcomes and results.
43. Programme design will invariably be superseded by reality over time, as a result of changing conditions, emerging operational experiences, political and macro-economic changes, exogenous developments and force majeure. The supervision process will guide the programme towards the achievement of strategic objectives and broader poverty reduction outcomes, while ensuring fiduciary compliance and responsiveness to the accountability framework.
44. Supervision missions will be undertaken annually and complemented by short and focused follow-up missions as appropriate. The frequency and composition of supervision missions will be determined in light of actual requirements.

B.2 Describe the socioeconomic benefits to be delivered by the project at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environmental benefits (GEF Trust Fund/NPIF) or adaptation benefits (LDCF/SCCF).

45. The project would reach out to approximately 1,000 villages in 16 Localities. Households targeted in these villages would benefit from one or more activities:
- a. Livestock producers: approximately 20,100 direct beneficiaries would be involved in schemes for improved fattening of lambs and cattle, who would receive advisory, animal health and veterinary services, credit and supply of feed through partnering commercial banks and feed suppliers. The main benefits would result from higher sales prices due to better carcass weight and reduced mortality of animals. Annual sales (four cycles) would amount to SDG 51,000 per household, with a gross profit margin of SDG 10,089 (USD 1,770). The return on family labour would be SDG 38.8/day (USD 6.8/day). As young animals would be fattened and taken out of the traditional livestock system, the pressure on rangelands would decrease.
 - b. The Drought Monitoring, Preparedness and Early Response System (DMPERS) will: (i) identify key climate-related factors that have a critical impact on the livestock sector; (ii) elaborate sets of indicators for the measurement of these factors, and develop a system to monitor and forecast the seasonal/yearly productivity evolution of rangelands and pastures; (iii) identify a methodology to calculate the seasonal/yearly carrying capacity of rangelands, based on the calculation of critical thresholds; (iv) enable the elaboration of seasonal maps to inform decision making on the spatial and temporal distribution of herds in a given territorial unit; and (v) ensure transfer of the critical information to the local authorities, and from these to the final, beneficiaries (herders, and farmers' communities). Direct benefits to the livestock owners would be as follows: (a) advising livestock keepers, but particularly

nomadic pastoralist when (date/month) drought is going to have detrimental effect on the lives of their animals; (b) amount of stored feed necessary to get a TLU through the drought without losses; (c) best time of culling animal in order not to lose them to draught; (d) best place to sell animals in case of draught (e.g. slaughterhouse with freezing capacity etc.); and (e) the component will assist the insurance companies to develop a mortality insurance index for nomadic livestock keepers which can provide partly insurance cover for animal lost . This information will be providing via the ICT platform, radio, and TV.

- c. Conflict resolution: The project will provide heavy investment in institutional development to bring about a more functional, equitable and democratic community control of local resources, whereby communities derive direct benefit from the use of their resources by livestock owners. Agreements between settled communities and nomadic pastoralists around stock routes demarcation and the production/rehabilitation of water, fodder and other basic products along the stocking routes should help reduce disputes, improve livestock production and income generation opportunities for both settled and nomadic communities.
- i. Community Action Plans: the project would cover most of the 1,000 target villages through its 300 Community Action Plans (CAP) and establish (indicatively): (i) improved management of 334,000 ha of rangeland and 1,100 km of stock routes; (ii) fire risk and soil erosion reduction in 16,200 km of rangelands and woody vegetation; (iii) improved farmland productivity through climate-resilient agriculture practices in at least 12,000 ha; (iv) increased harvesting of about 516,000 cubic meters through the construction of climate-proof hafirs, water tanks, reservoirs, sand subsurface/charco dams, etc; (v) efficient use of firewood, reduction of pressure on woody vegetation, and prevention of health problems through the promotion of improved cook stoves and LPG. All these actions will increase productivity and availability of natural resources resulting in higher HH profits and sustainability of livestock, NWFP, and agriculture production.
- ii. Income diversification: Many households in all 1,000 target villages would participate in 5,000 Savings & Credit Groups with at least 60,000 members. Amongst these, at least 30,000 households would start small income-generating activities and approximately 5,000 micro- and small-scale enterprises would be established through business promotion and the provision of microcredit. Investments financially supported by the project will require environmental-sustainability among other criteria, and will be identified within the CAP priorities.

B.3 Explain how cost-effectiveness is reflected in the project design.

46. The project is mainly investment-oriented with a view to maximize the impact per GEF dollar. Project management and M&E costs are maintained at the lowest possible level. Investments in a sector that is significantly affected by drought, soil degradation and climate change through well targeted innovative technologies to help herders and farmers swift to climate-resilient practices, from excessive use of limited water resources to efficient water harvesting and irrigation, and from degraded natural vegetation to healthy rangelands and woody vegetation, would lead to increased cost-effectiveness. Reduced cost in relation to smallholders' entrepreneurship development, access to rural finance, and technical assistance and capacity development for the livestock and fodder value chains (due to the blended nature of LMRP and LDCF) will further reduce the share of "soft activities", leading to stronger investment and higher return. Cost-effectiveness will be further analyzed during project inception and implementation. The project proposal has been developed with the aim to ensure cost-effectiveness and sustainability also after the project completion. In spite of costs for adopting new practices, climate-resilient rangeland management techniques allow for a highly efficient performance, as they increase water availability and soil moisture-holding capacity, helping minimize the effects of drought and run-off erosion and improving soil health conditions resulting in higher carrying capacity, improved livestock health, and crop diversification with a positive effect in food security.
47. Sustainability: The sustainability of project interventions is ensured by the integration of lessons learned during implementation of projects being scaled-up, particularly with regard to: (i) empowering communities to drive planning, implementation and monitoring and evaluation to the extent feasible; (ii) ensuring sustainability of infrastructure investments through effective mobilization, training and regular follow-up of user associations by specialized field staff with a deep understanding of communities in which they work and extensive training in conflict resolution; (iii) linking saving and credit groups to microfinance institutions; and (iv) providing incentives to service providers to improve the quality of services offered to clients through performance-based contracting and supporting private agricultural and livestock extension providers (VATs). The climate financing and integration of adaptive planning will ensure that investments are more sustainable and contribute to vulnerability reduction.

48. Long-term sustainability will be sought through a broad and deep CB programme, designed to create a critical mass of knowledgeable and skilled experts on CC adaptation for livestock and rangeland management at the federal and state levels, and among all actors – from institutional to grassroots. The training of trainers (DATs) will be a key component of this programme. The CB process will integrate strong participatory elements to fully address issues that affect the long-term sustainability of natural resources and the welfare of local communities. The proposed approach to address the on-going and predicted impacts of climate change and climate variability in the livestock sector, which has consistently contributed the largest share of agricultural GDP of Sudan, and accounts for over half of agricultural exports in terms of value, and is widespread throughout most of the country, will be instrumental for scaling up interventions.
49. Exit Strategy: the LDCF intervention will seek its long-term sustainability through a broad and deep CB programme, designed to create a critical mass of knowledgeable and skilled experts on CC adaptation for agriculture development at the national level, and among all actors – from institutional to grassroots. The training of State-level Development and Adaptation Teams (SDAT) will be a key component of this programme. The CB process will integrate strong participatory elements to fully address issues that affect the long-term sustainability of natural resources and the welfare of local communities.
50. The sustainability of the investments in rangeland restoration and improved management will be guaranteed by: (i) the economic return that would accrue from the increased quantity and quality of fodder produced, the introduction of grazing fees, and the subsidiary wealth generated by the healthier agro-ecosystem – including fuelwood and other biomass, NTFPs, etc; (ii) the improvement of the health conditions of the herd due to decreased injury and infection caused to the animals by invasive species. The project will guarantee the sustainability of the investments in water conservation and management by introducing or strengthening the principle of water fees and payment for services. Building on existing, successful experiences the village clusters will manage the water points through the VDCs, charging nominal water fees. LMRP will build the capacity of the VDCs for the development of management and business plans to run the water-related business. As far as the water points located far from the villages, public/private enterprises will be developed for their management.
51. As far as Component 3 is concerned, at the inception phase of the programme, MoLFR and the project team will agree on the most appropriate arrangement for the outsourcing of the DMPERS management and hosting to a private operator (or through PPP arrangements), which will guarantee the sustainability of the system by taking over its management– including update, maintenance and the transfer of data and information to the final users – upon the payment of a nominal fee.

C. DESCRIBE THE BUDGETED M&E PLAN

52. Project monitoring and evaluation will be conducted in accordance with established IFAD and GEF procedures. In line with the GEF/LDCF operational principles, the LDCF M&E activities will be country driven and provide for consultation and participation in a decentralized manner, actively involving target groups and service providers, who will be duly informed about the plans, implementation and the results of evaluation activities.
53. The main objective of the proposed LDCF project will be to lessen the impact of climate change on vulnerable rural groups as well as on the natural resources critical for livestock production and for the rangeland ecosystems that sustain it, thereby increasing food security. The project will undertake a baseline assessment and participatory resource mapping exercise in each cluster of villages, including a rapid vulnerability assessment, to define the baseline status prevalent before the initiation of the project activities in the project areas. Basic data and information relevant to the project will be collected, and project indicators will be measured at this stage.
54. The M&E system will be designed to offer comprehensive and reliable information to improve planning and decision-making for results-based management. The logical framework will constitute the basis for results-based M&E. The M&E system will have a three-tier structure: (i) output monitoring with focus on physical and financial inputs, activities and outputs; (ii) outcome monitoring assessing the use of outputs and measure benefits at beneficiary and community levels; (iii) impact assessment assessing programme impact for the target group in comparison with objectives. All M&E data, analysis, and reporting will be disaggregated by gender. All M&E activities will be based on IFAD's Guide for Programme M&E.
55. The LDCF intervention will be fully blended with the IFAD baseline operations (LMRP programme) so they will share the monitoring and evaluation system. The overall responsibility for M&E activities will rest with the two Knowledge Management/M&E Officers M&E Specialists (East and West, KM/M&EO); based at the Programme Management Unit (PMU), and reporting to the Programme Director. The KM/M&EO will develop their workplan in

close liaison and interaction with the NRAM and the five NRAS in the five SIU. The KM/M&EO will establish a data collection, analysis and reporting system to track physical and financial performance and emerging impact.

56. The project's logical framework will be reviewed at a Start-up Workshop. The Project team will fine-tune the progress and performance/impact indicators of the project at the Inception Workshop with support from IFAD and project partners. Specific targets for the first year of implementation, progress indicators, and their means of verification will be developed at this Workshop. These will be used to assess whether implementation is proceeding at the intended pace and in the right direction and will form part of the Annual Work Plan. Targets and indicators for subsequent years would be defined annually as part of the internal evaluation and planning processes undertaken by the project team.
57. **Project Indicators:** The Project team will fine-tune the progress and performance/impact indicators of the project at the Inception Workshop with support from IFAD and project partners. Specific targets for the first year of implementation, progress indicators, and their means of verification will be developed at this workshop. These will be used to assess whether implementation is proceeding at the intended pace and in the right direction and will form part of the Annual Work Plan. Targets and indicators for subsequent years would be defined annually as part of the internal evaluation and planning processes undertaken by the project team.
58. Periodic monitoring of implementation progress will be undertaken by IFAD. This will allow parties to take stock and to troubleshoot any problems pertaining to the project in a timely fashion to ensure smooth implementation of project activities. A part of the participatory M&E will be devoted to ascertain the extent of women's participation in programme activities, constraints faced, benefits gained, aspirations met and impact on women's status in the family, their involvement in community affairs and the climate-proofing of their agriculture. Measurement of impact indicators related to adaptation benefits will occur according to the schedules defined in the Inception Workshop. The measurement of these will be undertaken through subcontracts or retainers with relevant institutions, or through specific studies that are to form part of the projects activities, or periodic sampling.
59. **Reporting.** Harmonized programme progress reports will be produced quarterly, semi-annually, and annually. Reporting progress will be made available for each of the five target States as well as consolidated for the whole project area.
60. Two Mid-Term Reviews will be undertaken in PY3 and PY5 covering: (i) physical and financial progress in comparison with the annual work plans and budgets (AWPB); (ii) performance assessment of service providers; (iii) institutional and national policy changes arising from programme activities; (iv) opportunities for deeper integration of implementation within national systems; and (v) overall progress towards the achievement of programme objectives. At the end of the programme, a Project Completion Report will be prepared by the Government, with IFAD support, to examine the overall programme performance, taking into account a broader and longer-term perspective.
61. The project will use locally adapted RIMS (IFAD Results and Impact Management System) surveys at baseline, mid-term and completion, as the main quantitative survey tool to provide information on three levels of results: (1st) project activities and outputs; (2nd) project outcomes, reflecting changes in beneficiaries behaviour, improved performance and sustainability of groups, institutions and infrastructure; (3rd) project impact on child malnutrition and household living standards. Ad hoc surveys, qualitative case studies and thematic reviews will be outsourced to independent institutions to verify results and draw lessons on themes such as climate resilience and adaptation, market access, community empowerment, infrastructure development and food security improvement. The operation and impact of the Community Action Plans will be specifically studied.

Learning and Knowledge Management

62. The LDCF operations will create valuable knowledge in climate resilience and adaptation on natural resources management, rangelands and livestock management, income diversification, community empowerment, infrastructure development and food security improvement, which will be captured by the PMU and utilized to generate lessons and best practices to be shared with public institutions, the IFAD country team, partners and others. In terms of Knowledge Management, operational experiences will create valuable knowledge in the target areas, which will be captured and utilized to generate lessons and best practices to be shared with beneficiaries, public institutions, the IFAD country team, partners and others. The results of programme support for rangeland restoration and water management, as well as sustainably expanding small businesses in rural areas will be widely publicized.
63. The project will promote: (i) knowledge networking through periodic seminars/workshops; (ii) publication of 'how-to' leaflets relevant to all work undertaken on restoration of nature assets, and (iii) audio-visual material

that capture lessons learnt and impact. Special emphasis will be placed on knowledge regarding climate change adaptation and disaster-risk development planning. The vulnerability assessments to be undertaken at village cluster level will be the basis for that, ensuring it guides adaptive long-term planning regarding development work in Sudan. Main anchoring points for knowledge management will be identified, including research institutions, civil society, regional KM networks and specialised service providers. The project will also promote: (i) in-country knowledge networking through periodic seminars/workshops; (ii) regional knowledge networking, such as the regional network on Knowledge Access for Rural Inter-connected Areas (KariaNet) for the management and sharing of knowledge, information and experience in agriculture and rural development in the Middle East and North Africa (MENA); and (iii) regional research networks including those supported by IFAD grants.

Evaluation

64. **Mid-term Evaluation** - An independent Mid-Term Evaluation will be undertaken at the end of project year 3 and project year 5 of implementation. The Mid-Term Evaluation will take the form of a qualitative study to determine the progress being made towards the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the project's term, including the revision of indicators if needed. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-term evaluation will be prepared by IFAD. The mid-term evaluation will be carried out in a synergetic and coordinated fashion with the Interim evaluation of enterprises and NRM activities that will be carried out for the baseline programme LMRP. Within six months of the completion of selected clusters of group and community interventions, a *Post-Implementation Evaluation* study would be carried out by a contracted independent body under the overall responsibility of the State cadres. Each evaluation would assess the achievement of the set objectives and draw lessons for the design and implementation of future similar small business projects and NRM initiatives. The evaluations would focus on the following key outcome/impact indicators: (i) level of satisfaction of beneficiaries with outcomes, based on a beneficiary assessment rating, such as the level of increased productivity or market access; and (ii) number of women and youth with increased access to assets, incomes or services resulting from enterprise developments. In addition, the evaluations would examine technical and management aspects of the interventions, with regard to appropriateness, sustainability and potential risks, as well as their environmental impact.
65. **Final Evaluation** - An independent Final Evaluation will take place three months prior to the terminal tripartite review meeting, and will focus on the same issues as the mid-term evaluation. The final evaluation will also look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. The Final Evaluation should also provide recommendations for follow-up activities. The Terms of Reference for this evaluation will be prepared by IFAD. The final evaluation will be carried out in a synergetic and coordinated fashion with Final Impact Evaluation that will be carried out for the baseline programme LMRP. The internal PCR would provide the basis for a substantial *Final Impact Evaluation* commissioned from an independent service provider at the end of implementation to assess (i) Programme effects and impact; (ii) sustainability of those effects; (iii) potential for upscaling Programme activities; (iv) lessons learned from implementation and recommendations for follow-up interventions; and (v) LMRP's outcomes and impact contributing to the achievement of national objectives in the rural sector. The research would mirror the scope and methodology of the *Baseline Study* to the extent possible, to detect any changes in precisely the same indicators selected and to attempt to attribute observed changes to Programme interventions and/or to other factors.

Table 1 - Monitoring and evaluation plan and budget

Type of M&E activity	Responsible Parties	Budget US\$ (LDCF contribution) Excluding project team Staff time	Time frame
Inception Workshop (IW) and report	GEF Coordinator/ PMU/SIUs	USD 10,000	Within first two months of project start up
Annual Progress Report (APR) and Project	Project Team IFAD		Annually

Implementation Report (PIR)			
Tripartite Review (TPR) and TPR report	Steering Committee Project team IFAD		Every year, upon receipt of APR
Steering Committee Meetings	Project Coordinator IFAD		Following Project IW and subsequently at least once a year
Mid-term Evaluation	Project team IFAD External Consultants (i.e. evaluation team)	USD 25,000	At the mid-point of project implementation.
Final External Evaluation	Project team, IFAD External Consultants (i.e. evaluation team)	USD 25,000	At the end of project implementation
Terminal Report	Project team IFAD External Consultant		At least one month before the end of the project

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(s) with this form. For SGP, use this OFF endorsement letter).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Dr. Babiker Abdalla Ibrahim	GEF Operational Focal Point Under Secretary	Ministry of Environment, Forestry and Physical Development	24 NOVEMBER 2013

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for CEO endorsement/approval of project.

Agency Coordinator, Agency name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
John McIntire, Associate Vice President, Programme Management Department IFAD			Rami Abu Salman, Regional Climate and Environment Specialist, Environment and Climate Division IFAD	+39 06 5459 2291	r.salman@ifad.org

ANNEX A: PROJECT RESULTS FRAMEWORK

Logical Framework

Narrative Summary	Key Performance Indicators	Means of Verification	Assumptions (A) / Risks (R)
Programme Goal			
<i>Increase food security, incomes and climate resilience for poor households in pastoralist communities.</i>	<ul style="list-style-type: none"> 60,000 households (HH) sustainably moved out of poverty. 60,000 HH have increased climate resilience. 100,000 HH have improved asset ownership index compared to baseline (RIMS). 	<ul style="list-style-type: none"> RIMS baseline and impact surveys. WFP periodic surveys. Government statistics. 	
Programme Development Objective			
<i>Improve livelihoods and natural assets in livestock-based communities.</i>	<ul style="list-style-type: none"> Average incomes of rural poor HH engaged in livestock value chains increase by 50% at Programme completion. 20% of HH participating actively in commercial farming by PY5. Poor HH reporting a sustainable increase in income (#). 	<ul style="list-style-type: none"> RIMS, baseline survey, mid-term and completion assessments. MoLFR surveys and reports. 	<ul style="list-style-type: none"> GoS retreat from its pro-poor policies focused on reducing income disparities. (R) Significant civil unrest in the Programme area. (R)
Component 1: Enhanced capacity for community adaptive planning/ Contributes to CCA-3 Total GEF Budget: USD 753,200			
Outcome 1.1: Community adaptive plans (CAPs) incorporating needs and priorities of poor women and men.	<ul style="list-style-type: none"> Baseline assessments including CC vulnerability of socio-ecosystems completed in 16 target Localities Members of 300 Village Development Committees (VDCs) and 126 governmental technical staff at the Locality and State levels capacitated with knowledge, organizational, and management skills on CC adaptation, CRR and NRM (#). 300 CAPS setting priorities for vulnerability reduction investments developed. 	<ul style="list-style-type: none"> Federal and State level statistics and inventories. Baseline reports and rangeland productivity records. Evaluation reports Field questionnaires. 	<ul style="list-style-type: none"> Key concerned stakeholders have the capacity to plan, design and implement required adaptation measures. (A) Poor maintenance of investments and governance conflicts result in reduced benefits to herders and farmers. (R)
Component 2: Vulnerability reduction investments based on adaptive management of NRM / Contributes to CCA-1 Total GEF Budget: USD 6,494,800			
Outcome 2.1: Community-based natural resource management and restoration to reduce the vulnerability of settled and nomadic pastoralists.	<ul style="list-style-type: none"> 100,000 households access pasture and water resources. 25% increase in rangeland productivity in target areas. 334,000 ha of rangelands rehabilitated in five target States. Water harvesting equipment for storing up to 500,000 m3 established. 12,000 ha of improved agriculture land (tree-crop-livestock system) established. 1,100 km of stock routes demarcated and restored. 	<ul style="list-style-type: none"> Federal and State level statistics and inventories. Baseline reports and rangeland productivity records. Field questionnaires. 	<ul style="list-style-type: none"> Key concerned stakeholders have the capacity to plan, design and implement required adaptation measures. (A) Poor maintenance of investments and governance conflicts result in reduced benefits to herders and farmers. (R)
Outcome 2.2: Diversification of livelihoods achieved through community level income generation activities and businesses.	<ul style="list-style-type: none"> New income generation activities resulting from CAPs demonstrated and adopted by 30,000 HH. Incremental income of HH from 5,000 microenterprises. 	<ul style="list-style-type: none"> HH income surveys. Beneficiary testimony. Programme reports. 	<ul style="list-style-type: none"> Lack of support from men and/or local leaders for women groups. (R) Limited rural business opportunities because of lack of local purchasing power. (R)

Narrative Summary	Key Performance Indicators	Means of Verification	Assumptions (A) / Risks (R)
Component 3: Climate change preparedness and policy facilitation / Contributes to CCA-2 Total GEF Budget: USD 846,000			
Outcome 3.1: Response systems and innovative solutions for climate risk mitigation.	<ul style="list-style-type: none"> • Drought Monitoring, Preparedness, and Early Response System (DMPERS) is effective and sustainable. • National Sectoral Adaptation Strategy for the Livestock Sector produced. • Disputes between nomadic and settled communities regarding access to NRs reduced by 50% in the 5 target areas. 	<ul style="list-style-type: none"> • National and State level statistics and inventories. • Policy documents and strategies. • MoU between federal and State authorities for management of RMEWS. 	<ul style="list-style-type: none"> • All key public and private stakeholders are willing to engage in development and implementation of measures for vulnerability reduction. (A) • DMPERS embedded and budgeted properly in Government services. (A)

ANNEX B: RESPONSES TO PROJECT REVIEWS (FROM GEF SECRETARIAT AND GEF AGENCIES, AND RESPONSES TO COMMENTS FROM COUNCIL AT WORK PROGRAM INCLUSION AND THE CONVENTION SECRETARIAT AND STAP AT PIF).

STAP Comments	GEF Responses
What kind of early warning system the project intends to develop	The Drought Monitoring, Preparedness and Early Response System (DMPERS) is described in detail in the paragraphs 137-147 (OP 3.1.1) of the LDCF Full Project Document. As mentioned in the LDCF project document, the early response activities will: (i) identify key climate-related factors that have a critical impact on the livestock sector; (ii) elaborate sets of indicators for the measurement of these factors, and develop a system to monitor and forecast the seasonal/yearly productivity evolution of rangelands and pastures; (iii) identify a methodology to calculate the seasonal/yearly carrying capacity of rangelands, based on the calculation of critical thresholds; (iv) enable the elaboration of seasonal maps to inform decision making on the spatial and temporal distribution of herds in a given territorial unit; and (v) ensure transfer of the critical information to the local authorities, and from these to the final, beneficiaries (herders, and farmers' communities).
Which hazards exactly will be covered	The project will address "drought" as the major climate change exacerbated hazard affecting rangelands productivity and water availability.
Who will be in charge of the operation and maintenance (O&M) of the early warning system	At the inception phase of the programme, MoLFR and the project team will agree on the most appropriate arrangement for the outsourcing of the DMPERS management and hosting to a private operator (or through PPP arrangements), which will guarantee the sustainability of the system by taking over its management—including update, maintenance and the transfer of data and information to the final users – upon the payment of a nominal fee.
How will the O&M be ensured and costs covered after the end of the project	See previous response.

ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS⁴

A. PROVIDE DETAILED FUNDING AMOUNT OF THE PPG ACTIVITIES AND THEIR IMPLEMENTATION STATUS IN THE TABLE BELOW:

PPG Grant Approved at PIF:			
<i>Project Preparation Activities Implemented</i>	<i>GEF/LDCF/SCCF/NPIF Amount (\$)</i>		
	<i>Budgeted Amount</i>	<i>Amount Spent To-date</i>	<i>Amount Committed</i>
Project Design and Monitoring and Evaluation Plan		19,000	24,804.36
National Consultants and Targeting		20,000	20,000
Vulnerability Assessments		7,624.05	9,119.20
Assessment of lessons learned from other projects		454.40	1,945.44
Stakeholder Consultation Meetings		5,142	5,142
TOTAL	73,059	52,220.45	61,011

⁴ If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent fund, Agencies can continue undertake the activities up to one year of project start. No later than one year from start of project implementation, Agencies should report this table to the GEF Secretariat on the completion of PPG activities and the amount spent for the activities.

ANNEX D: CALENDAR OF EXPECTED REFLOWS (if non-grant instrument is used)

Provide a calendar of expected reflows to the GEF/LDCF/SCCF/NPIF Trust Fund or to your Agency (and/or revolving fund that will be set up)