



REQUEST FOR CEO ENDORSEMENT¹

PROJECT TYPE: Full-sized Project

TYPE OF TRUST FUND: LDCF

PART I: PROJECT INFORMATION

Project Title: Support to the adaptation of agricultural production systems that are vulnerable to climate change			
Country(ies):	Mauritania	GEF Project ID: ²	3893
GEF Agency(ies):	IFAD	GEF Agency Project ID:	
Other Executing Partner(s):	PASK-II Project and MEDD	Submission Date:	
GEF Focal Area (s):	Climate Change	Project Duration(Months)	48
Name of Parent Program (if applicable): For SFM/REDD+ <input type="checkbox"/>	NA	Agency Fee (\$):	350,000

A. FOCAL AREA STRATEGY FRAMEWORK³

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Grant Amount (\$)	Cofinancing (\$)
CCA - 1	1.1 Mainstreamed adaptation in broader development frameworks at country level and in targeted vulnerable areas 1.2 Reduce vulnerability in development sector	1.1.1 Adaptation measures and necessary budget allocations included in relevant frameworks 1.2.1 Vulnerable physical, natural and social assets strengthened in response to climate change	LDCF	2,665,500	6,773,000
CCA - 2	2.1 Increase knowledge and understanding of climate variability and change induced risks at country level and in targeted vulnerable areas 2.2 Strengthened adaptive capacity to reduce risks to climate-induced economic losses 2.3 Strengthened awareness and ownership of adaptation and climate risk reduction process at local level	2.1.2 System in place to disseminate timely risk information 2.2.2 targeted population groups covered by adequate risk reduction measures 2.3.1 Targeted population groups participating in adaptation and risk reduction awareness activities	LDCF	556,300	2,740,000
Subtotal			LDCF	3,221,800	9,513,000
Project management cost ⁴			LDCF	278,200	960,000
Total project costs				3,500,000	10,447,000

¹ It is important to consult the GEF Preparation Guidelines when completing this template

² Project ID number will be assigned by GEFSEC.

³ Refer to the [Focal Area/LDCF/SCCF Results Framework](#) when filling up the table in item A.

⁴ This is the cost associated with the unit executing the project on the ground and could be financed out of trust fund or cofinancing sources.

B. PROJECT FRAMEWORK

Project Objective: Increase the resilience of rural communities in response to the harmful effects of climate change on the water resources and agricultural production systems						
Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Grant Amount (\$)	Confirmed Cofinancing (\$)
Minimize the risk of reduced productivity and agricultural production due to the impact of climate change	Inv.	<p>Improve the resilience of agricultural systems to climate through SLM</p> <p>Promote suitable crop techniques that recognize the value of effective traditional cropping practices</p>	<p>Soil fertility is improved through a technological SLM package leading to more resilient cropping systems</p> <p>Techniques of using and preparing organic fertilizer adopted and increase resilience to climate shocks</p> <p>Tools on cropping techniques are elaborated</p> <p>Adapted crop techniques refined in the rural areas and then widely disseminated</p>	LDCF	1,175,400	2,145,000
Improve the resilience of livestock farming and animal production systems in oasis and semi-arid areas	Inv.	<p>Promote climate change resilient rangeland and pasture management techniques</p> <p>Promotion of intensive production and conservation of green forage supported by an integrated livestock/cropping system</p> <p>Strengthen the resilience of livestock to climate change through referenced animal feeding practices</p>	<p>Protection and management of rangelands within the AGCL are undertaken by the rural communities;</p> <p>Pastoral areas are promoted for forage reserves during bridging periods</p> <p>Improved natural resources and rangelands management governance.</p> <p>production of green forage increased and capacity to secure livestock feeding improved needs during drought periods</p> <p>the livestock-cropping integration is promoted</p> <p>support the promotion of irrigated production of forage</p> <p>improved animal feeding on natural rangelands</p>	LDCF	531,600	1,745,000

			improved animal feeding from local bio-agricultural products.			
Increase the efficiency of the irrigation and water management systems.	Inv.	<p>Develop and manage land upstream and downstream of the dams</p> <p>Introduce irrigation systems in the oasis and the flood recession areas</p> <p>Monitor the water levels in the reservoirs and groundwater</p>	<p>water retention basins are implemented downstream</p> <p>Techniques of resilient soil and water management are tested and disseminated.</p> <p>300 drip irrigation kits are installed in oasis and flood recession cropping zones</p> <p>Surface and groundwater level in the project area is monitored</p> <p>12 limnimitric scales and 6 piezometers installed</p>	LDCF	1,140,200	3,125,000
Strengthen the adaptation capacities of the production systems in the rural areas to the impacts of climate change	TA	<p>Raise awareness and mobilize decision makers at the national and regional level for the adaptation of agricultural production systems to climate change</p> <p>Improve the capacities of managing and using agricultural production systems</p> <p>Develop capacities to promote irrigated crops</p> <p>Strengthen adaptation capacities to climate change of livestock farming in the oasis and semi-arid areas</p> <p>Strengthen local capacities in water control in semi-arid and oasis areas</p> <p>Recognize the value</p>	<p>Adaptation of agriculture production systems is integrated in national development policies ,strategies and budget</p> <p>Increased CC-adaptation awareness among the regional and local stakeholders</p> <p>Farmers are trained on resilient SLM practices</p> <p>Farmers are trained on techniques of improved seed production and the introduction of new improved and climate change-resilient varieties;</p> <p>Strengthened capacity for the diversification of energy sources to promote ecosystems resilience;</p> <p>Agriculture production tools and inputs are</p>	LDCF	374,600	2,498,000

		<p>of local knowledge and support the structuring of community organizations for a better adaptation</p>	<p>supplied to vulnerable farmers to increase their resilience capacity.</p> <p>Farmers have greater awareness and are trained on the practice of irrigated crops downstream from the dams</p> <p>Livestock farmers are aware of the livestock/crop integration methods;</p> <p>livestock farmers acquire the necessary know how for the production and the conservation and utilization of green forage</p> <p>collective rangeland management practices are promoted to increase resilient of pasture ecosystems</p> <p>Producers are trained in the use of water-saving irrigation methods</p> <p>Proven climate change adaptation initiatives of the agricultural production systems are identified, developed and disseminated through the exchange of community experiences;</p>			
			Subtotal		3,221,800	9,513,000
			Project management Cost ⁵	LDCF	278,200	960,000
			Total project costs		3,500,000	10,473,000

⁵ Same as footnote #3.

C. SOURCES OF CONFIRMED COFINANCING FOR THE PROJECT BY SOURCE AND BY NAME (\$)

Sources of Co-financing	Name of Co-financier (source)	Type of Cofinancing	Cofinancing Amount (\$)
GEF Agency	IFAD	Grant and Loan	8,150,000
National Government	Government	In kind	1,675,000
Other	Beneficiaries	In kind	648,000
Total Co-financing			10,473,000

D. GEF/LDCF/SCCF RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY¹

GEF Agency	Type of Trust Fund	Focal Area	Country Name/ Global	(in \$)		
				Grant Amount (a)	Agency Fee (b) ²	Total c=a+b
IFAD	LDCF	CC	Mauritania	3,500,000	350,000	3,850,000
Total Grant Resources				3,500,000	350,000	3,850,000

E. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:

Component	Estimated Person Weeks	Grant Amount (\$)	Cofinancing (\$)	Project Total (\$)
Local consultants*	112	93,200	121,400	214,600
International consultants*	0	0	0	0
Total	0	93,200	112,400	214,600

* Details to be provided in Annex C.

F. PROJECT MANAGEMENT COST

Cost Items	Total Estimated Person months	Grant Amount (\$)	Co-financing (\$)	Project Total (\$)
Local consultants*	192	168,000	70,000	238,000
International consultants*	4	47,600	200,000	247,600
Office facilities, equipment, vehicles and communications*	NA	20,600	630,000	650,600
Travel*	NA	42,000	60,000	102,000
Total	208	278,200	960,000	1,238,200

* Details to be provided in Annex C.

** For others, to be clearly specified by overwriting fields *(1) and *(2).

G. DOES THE PROJECT INCLUDE A “NON-GRANT” INSTRUMENT? NA

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

H. DESCRIBE THE BUDGETED M &E PLAN:

The operations of the M&E systems should therefore be designed and implemented by using the suitable components from IFAD’s *Manual on Results Monitoring* and a list of acceptable indicators. It should also be highlighted that each M&E operational system should also be in line with GEF’s specific demands. The participatory approaches to M&E are highlighted at all levels, concerning in particular, investments directly benefitting beneficiaries.

In the case of the LDCF project, a detailed plan (AWPB) will be prepared each year in order to identify the activities that must be implemented during the next 12 months. Each report will be sent to IFAD with copies to national counterparts so that it may propose revisions and recommendations they deem necessary.

Similarly, as regular activities of the organization, IFAD's technical team and the project consultants will meet on the project sites and draft the detailed reports on progress, achievements, project results, as well as lessons learned. These field reports will be transmitted, upon request, to the donor as well as other collaborative projects and partners.

The project's participatory approach will attract the local institutions to play an important role in monitoring. This role will be formalized and structured through the association of MEDD structures, as well as regional delegations of MDR and beneficiary associations of the pilot areas, which will be involved each year in the monitoring of the implementation and results, as actors of participatory M&E of PASK. All of the implementation institutions will ensure the monitoring of activities of which they are principally responsible (**Table 12**). The methodology of participatory evaluation will be developed at the beginning of the project and will consist in an important commitment of national institutions in mid-term assessment. In order to facilitate this, an appropriate support will be provided to the national counterpart in order that it may be able to conduct M&E activities in line with planning.

Summary of monitoring and evaluation, and responsible entities for drafting the reports

Type of M&E activity	Responsible entities	Timetable
Workshop and initial report	UG-PASK MEDD IFAD	Within the two months following project start-up
Database/Assessment	UG-PASK / Institutional support to hire	In the middle of year 1
Measuring the means of verifying indicators of project objectives	UG-PASK M&E Unit, local/international M&E institutions (consultants to hire)	In the middle and at the end of the project
Measuring the means of verifying project progress and performance	UG-PASK Local support institutions Associations/rural organizations	Annual
Semesterly reports and the annual project report	UG-PASK, IFAD, MEDD	Every second trimester; annual
Supervisions of data collection in the pilot sites	UG-PASK, LDCF focal points, support institutions with contractual agreements	Ongoing activity
Project Steer Committee reports	Working group of the project, PASK-UG	Bi-annual
Coordination meetings of the project	UG-PASK, Project partners	Monitoring of the project work plan
Meetings and reports on the tripartite revision	UG-PASK, IFAD, MEDD, other national counterparts	Bi-annual
Progress report (technical and financial)	UG-PASK	Agreement to be concluded between UG-PASK, MEDD and IFAD
Technical reports	UG-PASK National and international consultants	Agreement to be concluded between UG-PASK and IFAD
Self-assessments	IFAD, UG-PASK	Annual
Mid-term evaluation report	PASK M&E Unit, external consultants, IFAD	Half-way into project implementation
Final external evaluation	External consultants, IFAD	At the end of project implementation
Final report	UG-PASK	At least one month before project completion

The meetings of the project's Steering Committee will also be convened every six months. A progress report, concisely estimating the implementation level of the programmed activities, the results produced and the advancements made in achieving project objectives, will be prepared and disseminated two weeks before each Steering Committee meeting, which will conduct an analysis of the report and make recommendations for all necessary monitoring actions to improve project performance.

The results of the M&E system will also contribute to strengthening overall knowledge on climate change adaptation. More specifically, it will contribute to enriching the knowledge base by drawing on lessons learned from the cost-effectiveness of the models of adaptation activities as well as the need to best use and extend these activities to the entire country. Finally, it will contribute to developing PMA strategies by indicating the implementation framework for: (i) changes at the level of the project area; (ii) successful practices in re-qualification and improvement of knowledge on climate change adaptation; and (iii) intersectoral strategies, notably climate change adaptation.

The M&E function will be integrated in the overall M&E system of the PASK-II operation. Total cost of the M&E system are included under project management. They are estimated at a total cost of \$ 280,000. LDCF financing will cover monitoring of ground and surface water resources at the cost of \$ 222,900 and the remaining will cover daily monitoring. The LDCF component is an integral part of the PASK-II Project and co-financing will mainly cover the M&E of this project as a blended component of the baseline.

PART II: PROJECT JUSTIFICATION

A. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:

A.1.1. The [GEF focal area/LDCF/SCCF strategies](#):

The LDCF projects on climate change supports developing countries and economies in transition to contribute to UNFCCC's overall objective to achieve "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner" (UNFCCC, Art. 2).

The project is in line with the strategy, the objectives, and activities that are eligible for LDCF financing through GEF (Adaptation to climate change), because it targets the adaptation to climate change of the agricultural production systems and water resources in the arid and semi-arid areas as well as poverty reduction. It proposes an integrated approach to increase the resilience of agricultural production systems to climate change and to ensure, in the short and medium term, the benefits of adaptation to climate change for the local population, and in the long term, an improvement in productivity and a sustainable reduction of land degradation and desertification. In addition, the project is located in an area that provides a good demonstration site for the dissemination of climate change adaptation practices. Further, the project target area, which is located in southeast Mauritania, is part of a highly vulnerable ecosystem with the highest poverty rate and the weakest access rate to basic infrastructures in the country. It is also characterized by increased water stress, plant production systems that are dependent on rainfall, and extensive livestock farming: it is an area that is representative of comparable environments in Africa, particularly in the Sudano-Sahelian area. Indeed, it is estimated that over 95 percent of African agriculture is rainfed agriculture and that three-quarters of the countries in Africa are located in areas where a slight reduction in precipitation would create a significant reduction in the overall availability of water.⁶ This initiative therefore presents a replicability potential, in Mauritania, at the regional level and beyond.

⁶ *Forum pour le partenariat avec l'Afrique unité de soutien. L'Afrique et le changement climatique. aperçu n°1, septembre 2007*

The IFAD programmes and projects mainly support four types of adaptation activities: (i) diversification of livelihoods to reduce the risk; (ii) improvement of agricultural techniques and technologies; (iii) strengthening of the community management of natural resources; and (iv) preliminary planning and the adaptation to disasters. IFAD also strengthens mitigation actions in the reforestation sectors and improvement of planning and use of soil, particularly through the remuneration of environmental services and the promotion of renewable energy sources. As one of the main financing mechanisms of climate change, GEF is a fundamental partner for IFAD, which acts on its behalf. The IFAD/GEF partnership is currently focused on the links between poverty reduction, sustainable land management and climate change.

a.1.2. For projects funded from LDCF/SCCF: the ldcf/sccf eligibility criteria and priorities:

A.2. National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAS, NAPs, NBSAPs, national communications, TNAs, NIPs, PRSPs, NPFE, etc.:

The proposed project responds to pressing and urgent needs to adapt to climate change, identified by the Government of Mauritania in its PANA. Indeed, PANA of Mauritania identifies the animal and plant production systems and the water resources as primary priority sectors for the adaptation, followed by silviculture and semi-arid ecosystems. It is the first adaptation initiative of three of the most vulnerable sectors (the agricultural sector and water resources).

Further, the activities recommended by the project are in line with the existing development and sectoral strategy framework of Mauritania. Therefore, the project responds to the main national priorities expressed in the CSLP II and contributes to achieving Mauritania's national development goals, notably those related to: (i) economic activities and the well-being of the poor; (ii) the development of the agricultural and rural sector; (iii) the development of human resources and access to basic infrastructures; (iv) institutional development achieved through good governance and the participation of all actors. Moreover, the project activities are in line with the priorities of the National Strategy on Rural Development (SNDR), which emphasizes the improvement of agro-silvo-pastoral productivity, fair access of the most vulnerable population to development resources, and their rational and sustainable use, as well as strengthening the management capacities of integrated and participatory rural development.

By supporting the integration of climatic risks in the various strategy and development plan frameworks, the proposed project with complete the above policies and assist in making agricultural and socio-economic development efforts in Mauritania more resilient to climate change. It will thus contribute to the secured achievement of the MDGs, which could otherwise be undermined by climate change.

Moreover, the proposed project is also in line with the PANE, PAN/LCD, CSI-GDT, SNBD and the New Declaration on the Water Sector Development Policy, all of which follow parallel objectives towards the resilience of the ecosystem services for agriculture and food production to climate change (see also the section, Main strategies and national policies).

Finally, the proposal is in line with the IFAD Country Strategic Opportunities Programme, COSOP) 2007–2012, whose first and third strategic priorities are, respectively, “Strengthen the institutions of the rural poor by using the participatory approach” and “Achieve sustainable agricultural development and food security.” It is also in line with the strategic priorities of the United Nations Development Assistance Framework (UNDAF), in particular, the fourth priority, which is focused on “fighting poverty through sustainable management of the environment, food security and access to resources.”

B. PROJECT OVERVIEW:

B.1. Describe the baseline project and the problem that it seeks to address:

The PASK II project, which is being formulated, is the baseline for the Least Developed Countries Fund (LDCF) component. This means that the activities of the component are organized as additional elements to those of PASK II. This additional aspect focuses on the implementation of activities that are solely dedicated to adapting to climate change, but also to breaking down barriers to the populations' incapacities to undertake subsistence activities.

The project objective is to improve the living conditions and income of the targeted populations. The specific objectives should take into account: (i) the strengthening of the targeted population's participation in local development/partnership; (ii) the conservation and recognition of the value of the natural resources for/by the local targeted populations; (iii) the promotion of an economic growth rooted in the sphere of the target populations and based on the development of local opportunities; and (iv) the strengthening of good governance and good management at all levels involved in the project.

The PASK II project is focused on four components: (i) support to local development; (ii) soil restoration, and surface water mobilization and management; (iii) agricultural and livestock farming systems; and (iv) project coordination.

The intervention area would be identical to that of PASK I, i.e. the Moughataas of Kankossa, M'Bout and Ould Yengé. The project intervenes in three Moughataas located in three different wilayas: M'Bout in the Gorgol region, Ould Yengé in Guidimakha and Kankossa in Assaba for a total population estimated at 183,5337 on a total area of 25,600 km². Programme implementation is spread out over a seven-year period.

The strategy of the PASK II project is based on a combination of targeting elements: (i) the degree of poverty and exposure to climate change of the communes and villages; (ii) economic potential and technical opportunities of surface water mobilization; and (iii) poor and motivated groups and individuals.

The approach elements of the project are based on: (i) "scaling up", i.e. promoting the replication of successful experiences of *Projet de Gestion des Ressources Naturelles (ProGRN, Natural Resources Management Project)*, *Projet de Gestion des Ressources Naturelles dans le Guidimakha (PGRNG, Natural Resources Management Project in Guidimakha)*, *Valorisation des Initiatives de Croissance Régionale Equitable (VAINCRE, Promotion of Equitable, Regional Growth Initiatives)* and the promotion of private service providers from the rural population aimed at professionalization and jobs of the future; (ii) access to knowledge and building of competences; (iii) choice of implementation mechanisms (municipalities and rural organizations); (iv) structuring and strengthening of rural organizations; and (v) convergence towards national policies.

The agricultural sector is the backbone of the Mauritanian economy. In the current scenario without adaptation, climate change is liable to reduce the GDP share of the agricultural sector. Indeed, according to a study on the impact of climate change in Africa, the GDP of the agricultural sector in Mauritania will change, on average, from 5 to 15 percent (according to the model used) in the year 2100 due to climate change. In addition, the study estimates that the GDP share of the agricultural sector in Mauritania will be reduced to 7.44 percent. Without taking into consideration climate change, the baseline scenario on agricultural development aims towards a sustainable improvement of the living conditions of the poor, rural population (women, men and youth).

The IFAD strategy in Mauritania, which is completely in line with CSLP II, pursues the following three strategic objectives: (i) strengthening of rural institutions by using a development approach that takes into account the needs of the communities; (ii) promoting sustainable rural financial services; and (iii) achieving a sustainable agriculture development and food security. The proposed project will be linked at the project level to IFAD's PASK II *Projet de lutte contre la Pauvreté dans l'Aftout Sud et le Karakoro (Aftout South and Karakoro Poverty Reduction)*, which is being formulated. The proposed approach under the baseline scenario is purely towards development, which is based on the multidimensional issue of property. It therefore proposes a strategy that is at once economic, social and institutional, despite the fact that climate change is recognized as one of the main risks to hinder the

⁷ *Census of 2000, updated in 2008*

achievement of the rural development objectives in Mauritania.

The current development scenarios have not successfully integrated climate change in the sectoral planning. In particular, the baseline approach does not consider the possible modifications that climate change could cause to the conditions on which the development efforts have been based. In such a situation, climate change will lead to: a reduction in agricultural production potential and will have an impact on its environment upstream (mainly due to harvest failure and the natural resources degradation); an increase in the vulnerability of animal production systems; forced migration; and consequently, induced changes in terms of land use and natural resources management as a whole. In addition, under the baseline scenario, climate change will lead to a reduction in the groundwater level and other sources of natural water. With respect to production systems, the most vulnerable and most affected activities are those that depend on rainfall, particularly rainfed agriculture, which predominates in Mauritania. With respect to animal health and livestock survival, the method of herd management, transhumance and the large concentration of animals around the water points tend to favour contagious diseases. Moreover, the periods of shortage of fodder lead to problems linked to malnutrition and render the animals less resistant to pathogenic diseases and other environmental factors.

In addition, investments of the basic project, PASK, should generate important socio-economic benefits. However, since PASK is mainly focused on the investments and productivity, its impact on the environmental and climate change issues in the project area will only be indirect. This is because it will take into consideration the socio-economic aspects of climate change within a framework that, as a whole, does not include adaptation issues. According to the base scenario, PASK runs the risk of not facing the deep causes of vulnerability of the production systems, but rather, only their symptoms. All of these elements mentioned above can hinder the achievement of the development objectives under a base scenario if the appropriate adaptation measures are not implemented. In particular, the objectives considered by the PASK II project can fail due to unplanned losses of agricultural production, and a reduction of national ecosystem services, livestock productivity and of water availability.

B. 2. [incremental /Additional cost reasoning](#): describe the incremental (GEF Trust Fund) or additional (LDCF/SCCF) activities requested for GEF/LDCF/SCCF financing and the associated [global environmental benefits](#) (GEF Trust Fund) or associated adaptation benefits (LDCF/SCCF) to be delivered by the project:

Climate change is a growing threat to socio-economic development in Mauritania and to its agricultural production systems and food security in particular. The combined effects of drought, climate hazards and human activities have considerably increased the vulnerability of the animal and plant production systems throughout the country. Urgent measures must be taken in order to expand the current range of solutions and to increase resistance capacity to climate variations and extreme meteorological phenomena, and consequently, to climate change in the future. Learning to adapt to climate variations and extreme meteorological phenomena is an excellent means to develop long-term adaptation capacities. The proposed project responds to the pressing and urgent needs to adapt to climate change, identified by the Government of Mauritania in its PANA. Indeed, PANA identified livestock farming, water and agriculture as key priority sectors for adaptation to climate change, followed by forestry and semi-arid ecosystems. Moreover, the actions proposed are in line with the Government's development strategy, as defined in the CSLP II, and contributes to achieving the national development goals, in particular those related to: (i) economic activities and wellbeing of the poor; (ii) the development of the agricultural and rural sector; (iii) the development of human resources and access to basic infrastructure; and (iv) institutional development achieved through good governance and the participation of all of the actors. Further, the proposed project promotes synergies with national strategies for the implementation of different United Nations agreements on the environment, particularly UNCCD and United Nations Convention on Biological Diversity (CBD). The proposed project is also in line with PANE and the SNDD, which are the general framework of the policy environment of Mauritania.

The proposed project will target critical areas in the M'Bout regions (Gorgol), Ould Yengé (Guidimakha) and Kankossa (Assaba). These regions are among the poorest in the Mauritania, and their inhabitants are extremely

vulnerable to the effects of drought and climate change. The irrigated or potentially irrigable areas, or the land where water resources are sufficiently available and suitable for the activities to adapt to climate change, and will serve as pilot demonstration areas.

The proposed project will cover the costs associated with climate change in the agricultural sector. More specifically, it will try to reduce the projected downward trend in the agricultural production system under the baseline scenario. This will be achieved through an investment package that will ensure benefits for the local population of adapting to climate change in the short and medium term. It will also make it possible, in the long term, to reduce to a minimum the impacts of climate change on agricultural production and its support services for the natural resources. The objective is to maintain/improve the existing agricultural conditions and practices even within a context of climate change, without influencing the conditions in which current efforts in rural development have been established. As a result, the proposed intervention will, ultimately, produce a long-term benefit and sustainable development. The adaptation costs borne by the proposed project (IFAD/LDCF) are mostly associated with additional investment and are actual costs on the ground, and will also cover capacity-building activities both at the local and national levels. Table 3 summarizes the activities proposed by the LDCF project to address the problems linked to climate change that have been ignored in the baseline

Lessons learned that will emerge from this project are numerous and will also be of sure interest to other countries in the region. By regularly updating the practices to adapt to climate change, Mauritania will contribute to the international database regarding the best adaptation practice, for which the need is felt to establish an adaptive capacity for the entire African continent.

Climate change-related activities carried out with the support of the LDCF project and that are not taken into account by the baseline

Components	Climate change-related issues that are not taken into account in the baseline	Proposed adaptation measures
<p>Component 1: Minimize the risk of reduced agricultural productivity and production caused by the impact of climate change</p>	<ul style="list-style-type: none"> - Expected loss in agricultural productivity (a greater risk of variability in agricultural productivity) and in quality - Changes/deterioration in improving crop conditions – increase in the frequency of crop failure - Reduced capacity of the rural population to respond to the impact of climate change (increased food insecurity, farmers' income) - Increased land degradation - desertification to the deficiency of water resources, loss of soil structure, land abandonment 	<ul style="list-style-type: none"> - Introduction of resilient/improved varieties and protected varieties - Improvement of water and soil management practices (i.e. irrigation, restoration of soil fertility) to render crop systems more resilient to climate stress - Income diversification, in particular, by changing the type of crop/crop system, secured and supported by a supply of energy in the form of local wood.
<p>Component 2: Improve the resilience of the livestock farming and animal production systems in oasis and semi-arid areas</p>	<ul style="list-style-type: none"> - Higher livestock mortality - Loss of forage – loss of biomass – reduction of pastoral area - Loss of water availability for livestock - Method of pastureland management that is incompatible with the change 	<ul style="list-style-type: none"> - Promotion of an integrated cropping and livestock farming system - The treatment of unrefined fodder and the promotion of the use of multi-nutritional blocks; - The introduction of practices of

	<p>in climatic/environmental conditions</p> <ul style="list-style-type: none"> – Carrying capacity of the pastureland is reduced due to climate change 	<p>managing pastureland that are more compatible with current climate variability.</p>
<p>Component 3 : Increase the efficiency of the irrigation systems and of water management</p>	<ul style="list-style-type: none"> – Reduction in the groundwater levels – Increase in irrigation water needs – Reduction of water quality for irrigation and human use 	<ul style="list-style-type: none"> – Increased efficiency of water use by promoting irrigation methods that save on water – Establishment of a water use surveillance system – Control of erosion – integration of water resources in planning.
<p>Component 4: Develop production systems' capacities to adapt to climate change in the rural areas from the viewpoint of sustainable development</p>	<ul style="list-style-type: none"> – Lack of knowledge and preparation at the government level to integrate climate change in sectoral planning (agriculture and water) – Lack of awareness of the impact of climate change at the local level – Lack of coordination for planning and implementing climate change adaptation. 	<ul style="list-style-type: none"> – Increased knowledge at the local level to shift awareness to the impact of climate change – Aware-raising campaigns focused on adaptation – Strengthening of institutional capacity (at the local and central levels) to integrate climate change in the development process of the area

The proposed activities take into account other current projects in the country carried out by the different actors in order to avoid duplications and to ensure synergies with other activities conducted in the same domain as that of the proposed project. IFAD will play a crucial role in providing supporting, through project cofinancing, but also in assessing the best national method of implementation, supervision and mitigation of project-related risks. Project implementation will be conducted in coordination with the shared programme of the United Nations in Mauritania.

B.3. 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 environment benefits (GEF Trust Fund) or adaptation benefits (LDCF/SCCF). As a background information, read ["Mainstreaming Gender at the GEF."](#):

This project is integrated in a wider rural development initiative that is trying to target the poorest of the poor and the most vulnerable segments of the rural society. Women youth and children are particularly vulnerable, and these will represent a major target group for both the IFAD and the LDCF operations. Project activities should yield significant socio-economic benefits by coupling this adaptation project with a rural development initiative. IFAD and GEF targeting policies have been carefully used and assessed through the project design phase.

B.4 Indicate risks, including climate change 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:

The project risks are, above all, natural and institutional ones. The risks of natural disasters such as climate variations, drought and insect infestations are endemic in the region; the populations of the area have long experience in the fight against them. These risks are tolerable if they have a relatively short duration, but become dramatic if they last several years

The project will strongly rely on the strength and commitment of local stakeholders, in particular, the communes

and rural organizations that will be the main participants. The project will ensure that these organizations are mobilized and made responsible with commitments, financing, jurisdictions, and sufficient support to allow them to provide leadership, guidance and an enterprising spirit needed to implement and manage the planned initiatives. Risks and mitigation measures are summarized in the table below:

Risks	Rate of risk *	Risk reduction measures
Local and regional insecurity and political instability	M	<ul style="list-style-type: none"> – IFAD will carefully assess and monitor this risk and negotiates adequate implementation arrangements with the government
Persistence of extreme poverty and non-access to technological packages beyond the project duration	L	<ul style="list-style-type: none"> – Combatting poverty is one of the main priorities of the government – The proposed technological packages are based on improved packages that farmers and livestock farmers know already – PASK-II will run for 8 years which will offer an opportunity for further support beneficiaries beyond the LDCF project duration.
Capacity to manage local associations		<ul style="list-style-type: none"> – Adequate technical assistance will be provided
Risks of crop plagues and pests/crop failure	M/H	<ul style="list-style-type: none"> – The manifestation of diseases due to climate variability can be a source of risk of harvest failure during the project life. The integrated parasite management approach is an effective method developed to reduce the risk of parasites and outbreak of disease; however, it has not yet been adopted throughout the country. – The project will address this risk by increasing the adoption of integrated parasite control measures and by prolonging the community's observation capacities on the field. Awareness-raising and training sessions will be organized to increase the willingness of the farmers to adapt to climate change.
Availability of seeds, inputs, food supplements due to climate variability (seeds, food supplements)	W/M	<ul style="list-style-type: none"> – Climate and/or parasite variability and the emergence of diseases can lead to a lack of grain, which could negatively influence the new distribution of varieties. The project will address this risk by extending the community's observation capacities in the field to reduce failures in grain multiplication. While the interventions are developed in different areas, the extremely dry growing seasons should not affect all the sectors of the intervention (multiplication fields) at the same time.
Weak involvement of actors and low dissemination of knowledge	M	<ul style="list-style-type: none"> – The project plans to organize several awareness-raising campaigns at the national, regional and local levels, which should stimulate the involvement of different actors. – The project will adopt a participatory approach based on demand during the cycle and the implementation process. – Lessons learned will also be disseminated through workshops and by showing films to ensure that they reach a greater critical mass.
Predominance of illiteracy and weak mobilization in the rural areas	M	<ul style="list-style-type: none"> – The PASK project plans to conduct literacy activities. – Awareness will be raised among management committees and farmers involved in the various interventions, who will undergo the necessary technical training to ensure that they adopt adaptation activities.
<p>Overall rate of risk – M Rate of risk – H (high risk), S (substantial risk), M (moderate risk), and W (weak risk). The risks refer to the possibility that the hypotheses, defined in the log frame, cannot be tenable.</p>		

B.5. Identify key stakeholders involved in the project including the private sector, civil society organizations, local and indigenous communities, and their respective roles, as applicable:

At the central level, the LDCF project will be largely coordinated through existing agreements with the main counterparts represented by the supervisory institution the supervisory authorities and steering committee for PASK. In line with its mandate, this institution will be responsible for all implementation aspects of the project, while MEDD will guarantee the political context and positive coordination between the different ministries of the Government. A capacity-building plan will be established under the supervision of MEDD in order to ensure that the climate change-related aspects are taken into account in the production systems in the rural areas. Capacity building activities (under component 1 of the LDCF funding) will be directly implemented by MEDD through a convention between MEDD and MPU of PASK-II. The project will also work with partners and NGOs at the local level to implement its planned activities and to reach the grass-root levels. The following table provides the potential role and responsibilities by component and sub-component for the implementation of the LDCF project.

Component	Subcomponent	Partners
Minimize the risk of reduced productivity and agricultural production caused by the impact of climate change	SC1.1 Improve the resilience of agricultural systems to climate change by promoting suitable methods and practices of sustainable land management (SLM)	MDR, Association of beneficiaries
	SC1.2 Promote appropriate crop techniques recognizing the value of effective traditional practices in sustainably improving soil fertility	
	SC1.3. Introduce in rural areas new varieties of adapted seeds that are resilient to climate change	
	SC1.4 Promote the diversification of energy sources by promoting village forest perimeters adapted to the arid areas.	MEDD, Association of beneficiaries
Improve resilience of livestock production systems in oasis and semi-arid zones	SC2.1 promotion of resilient pasture management practices	MDR, Association of beneficiaries
	SC2.2 Promotion of intensive production and conservation of green fodder supported by an integrated livestock/cropping system.	
	SC2.3 Strengthen livestock resilience to climate change through a referenced animal feeding practices	MEDD, MDR, Association of beneficiaries
Increase the efficiency of irrigation and water management systems	SC3.1 management in up and down stream of dams that are planned under PASK-II	MDR, MHA, Association of beneficiaries
	SC3.2 Improving the irrigation system in the oasis and flood-recession cultivated zones	
	SC3.3 monitoring of water level in basins and in aquifers	MDR, MHA, MEDD
Develop the capacities and raise awareness of the population on the climate change issue and its impact on the production systems in the rural areas.	SC4.1 sensitization and mobilization of decision-makers at the national and regional level for the integration of CC adaptation in agricultural production systems.	MEDD (direct implementation)
	SC4.2 Improve the capacity of exploitation of agricultural production systems	MDR
	SC4.3 capacity building for the promotion of irrigated cropping	MDR, MHA
	SC4.4 capacity building for the adaptation of livestock production systems to climate change in oasis and semi-arid zones	MDR, MHA
	SC4.5 Local capacity building for water conservation in semi-arid and oasis areas	MDR, MHA
	SC4.6 Valorization of local knowledge and support to the community organizations	MDR

B.6. Outline the coordination with other related initiatives:

IFAD, its United Nations partners and the Government of Mauritania place great importance on the adoption of collaborative approaches and seek complementarities with other development partners, as envisaged by the Paris Declaration on aid effectiveness and the harmonization and alignment of United Nations goals. In this context, IFAD has contributed to the joint matrix of donor interventions for the 2006–2010 period, in response to the second draft of the Mauritanian strategies of poverty reduction and the resultant action plans. As a result, IFAD interventions are part of the axes of the poverty reduction strategy and are coordinated with those of other donors

The interventions financed by GEF in Mauritania support several projects in the main areas of climate change, biodiversity, land degradation in multi-focal areas and those areas where there are persistent organic pollutants. There are limited possibilities to establish ties with eight of these projects, which are positive activities: (i) the UNDP/GEF project on the Adrar solar initiative and decentralized electrification of the northern coast of

Mauritania through hybrid systems (wind/diesel); (ii) the World Bank/GEF Projet d'amélioration communautaire des bassins versants (PACBV, Community-Based Watershed Management Project); and (iii) the GEM/IFAD project on the participatory protection of the environment and poverty reduction in the oasis areas of Mauritania. This later provides the highest possibilities of collaboration and coordination links in SLM.

In addition, most of the projects underway in the field of climate change adaptation in the country address fishing and management of coastal areas, for example, the UNDP/SPA project, Adaptation au changement du climat des zone côtière en Afrique de l'Ouest (Adapting to climate change in the coastal areas in West Africa) and the project Adaptation au changement du climat de la politique de pêche (Adapting fishing policies to climate change), financed by the International Development Research Centre (IDRC). These projects have no direct ties with the proposed project. However, with respect to the capacity-building aspect, a tie can be established with the regional project financed by the Canadian International Development Agency (CIDA), which is entitled, Appui à la capacité d'adaptation au changement du climat (Support to the capacity of adaptation to climate change), which is implemented by the AGRHYMET Regional Centre (CRA). Coordination will also be ensured with WFP's work on food security for poor rural households and the mitigation of vulnerability to unpredictable atmospheric conditions.

Further, the proposed project will ensure coordination with an IFAD programme and will receive cofinancing from it, which is currently under preparation and entitled, Appui aux pauvres ruraux pour adresser le changement du climat en Afrique (Support to the rural poor in addressing climate change in Africa). It aims at reducing risks and vulnerability to climate change in selected poor communities, while developing community adaptation and mitigation activities through local management of climate risks, and the use of a large array of options and adaptation practices extended to a wide range of land productivity options.

Finally, the implementation of PANA, which emphasizes agriculture and water resources management as well as adaptation priorities, will open other possibilities for coordination and synergies. The links between land degradation and climate change in Mauritania are clear, and the exchange of experiences, lessons learned and communication documents will finally be encouraged to maximize the mutual benefits that can be drawn from the GEF projects and beyond GEF, which work on SLM. The creation of a platform for knowledge management on SLM should allow better coordination and exchange of information that will avoid overlapping. Indeed, IFAD leads the process of Terrafrica in Mauritania by preparing and implementing a country strategic investment framework for SLM. A national ad hoc committee on SLM drafted a Ministerial decree whose mandate is the coordination of all activities and investments linked to SLM in the country, including activities aimed at mitigating and adapting to climate change through SLM.

C. GEF AGENCY INFORMATION:

C.1 Confirm the co-financing amount the GEF agency brings to the project:

IFAD will provide co-financing through its upcoming PASK-II program which his serving as the main baseline for this LDCF operation. Estimated co-financing amounts to \$ 8,150,000.

C.2 How does the project fit into the GEF agency's program (reflected in documents such as UNDAF, CAS, etc.) and staff capacity in the country to follow up project implementation:

The proposal is in line with the IFAD Country Strategic Opportunities Program, COSOP) 2007–2012, whose first and third strategic priorities are, respectively, “Strengthen the institutions of the rural poor by using the participatory approach” and “Achieve sustainable agricultural development and food security.” It is also in line with the strategic priorities of the United Nations Development Assistance Framework (UNDAF), in particular, the fourth priority, which is focused on “fighting poverty through sustainable management of the environment, food security and access to resources.” The project will be implemented through the PMU of the IFAD project PASK-II which will take full responsibility for project implementation and day to day management. Supervision will be provided from HQ and field visits and supervision missions.

PART III: INSTITUTIONAL COORDINATION AND SUPPORT

A. INSTITUTIONAL ARRANGEMENT:

At the central level, the LDCF project will be largely coordinated through existing agreements with the main counterparts represented by the supervisory institution the supervisory authorities and steering committee for PASK. In line with its mandate, this institution will be responsible for all implementation aspects of the project, while MEDD will guarantee the political context and positive coordination between the different ministries of the Government. A capacity-building plan will be established under the supervision of MEDD in order to ensure that the climate change-related aspects are taken into account in the production systems in the rural areas. Capacity building activities (under component 1 of the LDCF funding) will be directly implemented by MEDD through a convention between MEDD and MPU of PASK-II. The text of this convention will be submitted to IFAD for review and agreement.

The institutional set-up of PASK II will have to guarantee the coordinated, diligent and effective implementation of all of the aspects of the project (funding, components, etc.) and in particular, the LDCF-supported contributions. The Steering Committee of PASK II will consist of representatives of the national structures, local authorities and the beneficiary rural organizations of the area. MEDD will be a member of the Committee. In this framework, it will participate in guidance and monitoring, not only of LDCF funding, but also the entire project. The Steering Committee of PASK II will meet at least twice a year. In particular, it will have to approve the Annual Work and Budget Plans (AWBPs).

B. PROJECT IMPLEMENTATION ARRANGEMENT:

The organizational modalities for the implementation of the LDCF will be integrated in the overall implementation methodology of PASK-II. The LDCF will be managed through the PMU that will be created for PASK-II. The LDCF team will be composed of an environmentalist and three focal points that will work with the PASK-II team under the supervision of the coordinator of PASK-II. The team will be integrated at the level of the PMU (environmentalist) and the territorial units that are foreseen by PASK-II. The team will coordinate with different institutions that are involved in NRM in the project area (MDR, MEDD and MHA). IFAD will be the executing agency of the LDCF component. The quality of the technical and financial implementation of the project will be ensured according to the standards and procedures used by IFAD. Supervision will also be ensured by IFAD.

PART IV: EXPLAIN THE ALIGNMENT OF PROJECT DESIGN WITH THE ORIGINAL PIF

The project is aligned with the original PIF in terms of financial envelopes, approved components, outcomes and outputs. The allocation of LDCF financial envelopes by component are respected. In agreement with the government of Mauritania, IFAD has decided to use PASK-II as a baseline for this LDCF instead of the initially planned project (Value chain development program for poverty reduction). This is justified by (i) The stronger linkages that PASK-II has with the NAPA and the significant vulnerability to climate change in the PASK-II region; (ii) The higher co-financing that is being mobilized from PASK-II to support the LDCF project and (iii) the better synchronization of the PASK-II and the LDCF project that would lead to better synergies and harmonization of activities. The GEF agency estimated co-financing has increased from \$ 3.2 million (at PIF stage) to \$ 8,15 million at CEO endorsement.

PART V: 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 template. For SGP, use this [OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Mr. Mohamed Yahya Lafdal	Directeur de la Programmation, de la Coordination Intersectorielle et de la Coopération and GEF Focal Point	Environment and Sustainable Development	9 February 2009

B. GEF AGENCY(IES) CERTIFICATION

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

Agency Coordinator, Agency Name	Signature	Date	Project Contact Person	Telephone	Email Address
Mr Kevin Cleaver Associate VP Programs			Mr Naoufel Telahigue	+390654592572	n.telahigue@ifad.org

ANNEX A: PROJECT RESULTS FRAMEWORK

Description	Objectively verifiable indicators	Means of verification	Hypotheses (H) /Risks (R)
<p>Overall objective of the project: Increase the resilience of rural communities to growing water deficits and the loss of productivity of plant and animal production systems caused by climate change</p>	<p>By the end of the project:</p> <ul style="list-style-type: none"> - At least 60 % reduction in CC-related vulnerability in rural households (based on vulnerability perception assessments)- Vulnerability perception baseline will be estimated by community at project start up - At least 1000 farmers and livestock farmers successfully implement adaptation measures (baseline 30000 households are vulnerable) - At least 3 sectorial strategies/policies integrate adaptation measures to climate change (no specific strategy/policy entails deep analysis of CC at baseline) - At least 15 adaptation lessons are documented and shared at local, regional and international events (no adaptation experiences are documented at the local level) 	<ul style="list-style-type: none"> - Assessment reports (mid-term and final) 	<ul style="list-style-type: none"> - The beneficiaries adopt and apply the project strategy (H) - No major climate risks (R) - No plagues or crop pests (R)
<p><i>Specific Objective No. 1: Adapt the agricultural production systems that are vulnerable to climate change</i></p>	<ul style="list-style-type: none"> - Trends of agricultural yields and productivity of main crops. (trend with reference to baseline i.e. current average yields for main crops) 	<ul style="list-style-type: none"> - Assessment reports (mid-term and final) - Field visits and assessments 	<ul style="list-style-type: none"> - Participation of producers (H) - Seeds availability
<p><i>Specific Objective No. 2: Strengthen the resilience of the livestock farming systems to climate change</i></p>	<ul style="list-style-type: none"> - Decrease in animal mortality as a result of harsh climatic events (baseline: 10 to 20 %) - % (rate of adoption) of integrated and resilient livestock/cropping systems (0 % at baseline) 	<ul style="list-style-type: none"> - Evaluation reports (mid-term and final) - Supervision reports - Field visits and assessment 	<ul style="list-style-type: none"> - Participation of livestock farmers (H)
<p><i>Specific Objective No. 3: Improve the efficiency of water management systems and their adaptation to climate change</i></p>	<ul style="list-style-type: none"> - Number of water and irrigation management committees - Increase in water availability for cropping and livestock - Increase in water use efficiency up to 60 % at least (Baseline will depend on the irrigation system/soil and crop) 	<ul style="list-style-type: none"> - Evaluation reports (mid-term and final) - Supervision missions 	<ul style="list-style-type: none"> - Participation of producers (H)

Specific Objective No. 4: Strengthen the adaptation capacities of the production systems in the rural areas to the impacts of climate change	<ul style="list-style-type: none"> - Number of stakeholders with greater awareness and trained in the issue of climate change and its impacts on the production systems (Target is 900 farmers and baseline is 0) - Level of integration of the adaptation of production systems in the development planning process (planning, policies and strategies) - Level of appropriation and dissemination of knowledge on climate change at the local level 	<ul style="list-style-type: none"> - Evaluation report - Specific studies 	<ul style="list-style-type: none"> - The adaptation of production systems to climate change is well integrated in the planning (H) - Weak awareness among stakeholders (R) - Weak dissemination of knowledge (R)
Description	Objectively verifiable indicators	Means of Verification	Hypotheses(H) /Risks (R)
Component 1: Minimize the risk of reduced productivity and agricultural production due to the impact of climate change			
Sub-component 1.1: Improve the resilience of agricultural systems to climate change by promoting suitable methods and practices of sustainable land management	<p>By PY3 soil fertility is improved in 150 ha through SLM packages. 0 ha at baseline in targeted area</p> <p>Techniques for preparation and use of organic fertilizers are applied to 150 ha of land by PY3 none at baseline in targeted area</p>	<p>Evaluation reports</p> <p>Supervision reports</p>	<p>No plagues or crop pests (R)</p> <p>Participation of producers</p>
Subcomponent 1.2: Promote suitable crop techniques that recognize the value of effective, traditional practices for sustainably improving soil fertility	<p>Tools on suitable practices are developed by PY1. None at baseline</p> <p>The suitable land management techniques and practices are adopted, implemented and extended to 150 ha by PY3 . 0 ha at baseline in targeted area</p>	<p>Technical tools produced</p>	<p>Participation of producers</p>
Sub-component 1.3: Introduce new, adapted, climate-change resilient seed into the rural areas	<p>Resilient climate change seeds purchased and multiplied in the project area by PY4 (in tons). None at baseline in targeted communities</p> <p>Climate change resilient seeds distributed to farmers (Kg and # farmers) by PY4. None at baseline in targeted communities</p>	<p>Evaluation reports</p> <p>Supervision missions</p> <p>Assessments in the field</p>	<p>Availability of seeds and in quantity for multiplication by farmers (H)</p>
Subcomponent 1.4: Promote the diversification of energy sources by promoting village forest perimeters adapted to the arid areas	<p>At least 100 villages are identified and sensitized on NRM through the AGCL by PY1. None at baseline</p> <p>Village fire wood parks are established on 50 ha by PY4. None at baseline</p>	<p>Evaluation reports</p> <p>Supervision reports</p> <p>Assessments in the field</p>	<p>Participation of the population</p>

	# of alternative energy sources promoted by PY2 and PY4.		
Component 2. Improve the resilience of livestock farming and animal production systems in oasis and semi-arid areas			
Subcomponent 2.1. Promote climate change resilient rangeland and pasture management techniques	36 NR zones are recognized by the AGCLs by PY4. 0 NR at baseline 36 pasture areas are sustainably managed by the AGCL by PY4. 0 PA at baseline Good rangeland practices are identified and disseminated .	Evaluation reports Supervision reports Assessments in the field	Availability of water Participation of the beneficiaries
Subcomponent 2.2. Promotion of intensive production and conservation of green forage supported by an integrated livestock/cropping system	Production of green forage to increase livestock food security is promoted over 350 ha by PY4. 0 ha at baseline in the targeted areas Integrated crop/livestock systems are promoted on 350 ha by PY4. . 0 ha at baseline in the targeted areas TA is provided for implementation and monitoring	Evaluation reports Supervision reports Assessments in the field	Degradation of natural rangelands
Subcomponent 2.3. Strengthen the resilience of livestock to climate change through referenced animal feeding practices	Livestock feeding on natural pasture resources is improved (Increase of feed units per hectare). Feed units are estimated at 300 FU/ha/yr at baseline Animal feeding from bio-forage products is improved TA is provided by a livestock expert	Evaluation reports Supervision reports Assessments in the field Report of technical assistance	Availability of seeds Participation of beneficiaries Soil quality
Component 3: Increase the efficiency of the irrigation and water management systems			
Subcomponent 3.1. Develop land upstream and downstream of the dams planned by PASK	24 basins established by PY 4. 0 at baseline in targeted areas SWC techniques are tested and promoted over 12 ha of land Water r quantity mobilized and captured (m3/yr)	Evaluation reports Supervision reports Assessments in the field	Active participation of beneficiaries (H) Land tenure issues (R)

	Increase in the area of irrigated crops (% per year) 40 % at baseline		
Subcomponent 3.2. Introduce irrigation systems in the oasis and the flood recession areas	At least 180 drip irrigation kits are placed in the oasis of Kankossa and Sani by PY4. 0 at baseline in targeted area At least 120 drip irrigation kits are installed in villages near the flood-recession cropping areas. 0 at baseline in targeted area Water savings (yearly quantities). Baseline will be determined on yearly basis	Evaluation reports Supervision reports	Active participation of beneficiaries (H) Periodic failures of kits
Subcomponent 3.3. Monitor the water levels in the reservoirs and groundwater	By PY4, 6 piezometers are installed to monitor ground water availability and use. No piezometers are available at baseline By PY 4 12 limnitruc scales are installed. None at baseline	Evaluation reports Supervision reports Assessments in the field	
Component 4: Strengthen the adaptation capacities of the production systems in the rural areas to the impacts of climate change			
Subcomponent 4.1. Raise awareness and mobilize decision makers at the national and regional level for the adaptation of agricultural production systems to climate change	National rural development policies and strategies integrate adaptation to climate change (1 national workshop by PY1 and at least 2 by PY2) Local actors are sensitised and contribute to the implementation of CC adaptation activities (1 study tour, 1 inter-regional workshop and 3 workshops at the departmental level by PY4)	Evaluation reports Supervision reports Assessments in the field	Active participation of beneficiaries Weak coordination between actors (R)
Sub-component 4.2. Improve the capacities of managing and using agricultural production systems	Framers are trained in restoring soil fertility under increasing climate risks (1 training session by PY1). No training sessions are available at baseline Farmers are trained in the production techniques of improved seed varieties (1 training by PY2). No training sessions are available at baseline Improved capacities for the diversification of energy sources	Evaluation reports Supervision reports	Analphabetism in rural areas (R) Low organizational level of farmers (R)

	<p>Main production techniques are mastered by farmers (% by PY 2 and PY4)</p> <p>Technical capacities of farmers are improved to deal with climate risks (% of supported farmers by PY2 and PY4)</p>		
<p>Subcomponent 4.3. Develop capacities to promote irrigated crops</p>	<p>Improved farmer's capacity in managing irrigated crops (% of targeted farmers). Baseline is number of farmers per targeted areas (number driven by demand)</p> <p>At least 300 farmers are trained in managing irrigated crops in dam's downstream by PY4. no training provided at baseline</p>	<p>Evaluation reports</p> <p>Specific studies</p> <p>Progress reports</p> <p>Supervision reports</p>	<p>Weak knowledge of irrigated crop production systems</p> <p>Analphabeticism in the rural areas (R)</p>
<p>Subcomponent 4.4. Strengthen adaptation capacities to climate change of livestock farming in the oasis and semi-arid areas</p>	<p>At least 300 livestock farmers are sensitised and trained on methods for livestock/crop integration by PY4. no training provided at baseline</p> <p>By PY4 300 livestock farmers have the necessary know how to produce, use and conserve green forage baseline is number of farmers per targeted areas (number driven by demand)</p> <p>By PY 4 at least 300 livestock farmers have the knowledge for the implementation of collective rangeland management practices. baseline is number of farmers per targeted areas (number driven by demand)</p>	<p>Evaluation reports</p> <p>Progress reports</p> <p>Supervision reports</p>	<p>Willingness of livestock farmers to participate (R)</p>

<p>Subcomponent 4.5. Strengthen local capacities in water control in semi-arid and oasis areas</p>	<p>By PY 4, at least 300 farmers are trained on water saving irrigation techniques. baseline is number of farmers per targeted areas (number driven by demand)</p> <p>At least 300 producers are trained on maintenance of downstream water basins. baseline is number of farmers per targeted areas (number driven by demand)</p>	<p>Evaluation reports Progress reports Supervision reports</p>	<p>Analphabetism Weak mobilization of stakeholders</p>
<p>Subcomponent 4.6. Recognize the value of local knowledge and support the structuring of community organizations for a better adaptation of the agricultural production systems to climate change</p>	<p>CC adaptation initiatives are identified and diffused through community exchange mechanisms Local CC adaptation inventory is produced Number of exchange sessions and awareness raising between communities</p>	<p>Evaluation reports Progress reports Supervision reports</p>	<p>Difficulties in organizing the target groups</p>
<p>Component 5. Project Management</p>			
<p>Project Management and M&E</p>	<ul style="list-style-type: none"> - Implementation progress (Physical achievements and disbursement rates) - Participatory M&E in place and appropriate inputs are timely provided 	<p>AWPB Supervision reports M&E reports Mid-term review</p>	<p>Procedures (procurement, disbursement etc.) (H) Delays in preparing the detailed M&E plan and the baseline reference.</p>

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). All comments have been accommodated.

ANNEX C: CONSULTANTS TO BE HIRED FOR THE PROJECT USING GEF/LDCF/SCCF RESOURCES

<i>Position Titles</i>	<i>\$/ Person month*</i>	<i>Estimated Person months**</i>	<i>Tasks To Be Performed</i>
For Project Management			
Local			
Field focal points	900	144	<ul style="list-style-type: none"> - Prepare concrete and verifiable targets for project activities, including awareness campaigns, monitoring surveys and capacity building. - Develop and supervise the technical data for the M&E activities such as: (i) Develop procedures for monitoring results and collecting and recording data and observations, (ii) prepare reports on results and submit to project coordinator. - Prepare monthly, quarterly, and annual work plans for the project activities. - Prepare and submit monthly and all other types of progress reports at the site level - .Responsible for facilitating community mobilization and coordination of all project activities at the site level - Act as focal points for community mobilization. - Work with site level partners to implement project activities. - Organize and conduct local meetings, workshops, seminars, and other meetings. - Liaise with local service providers and contractors. - Prepare awareness programmes in consultation IFAD/LCDF coordinator. - Assist IFAD/LCDF responsible in organizing awareness campaigns and workshops at the district and village levels. - Assist in formation of farmer/ user groups where they are not in existence. - Assist in formation of community level management committees. - Develop options for adaptation in the pilot areas in consultation with community organizations, so as to : (i) promote efficient water management and use and agricultural production systems adaptation to climate change, (ii) Supervise and advise beneficiaries association in application of agricultural and livestock adaptation measures to climate change, and (iii) Organize transfer of required equipment, seeds, fertilizers, etc. for the treatments - Help the farmer groups build capacity to prepare adaptation initiatives and to access and make the best use of project funds. - Support farmer groups to improve their

			<p>capacities to effectively raise issues of concern at local level.</p> <ul style="list-style-type: none"> Facilitate farmer groups to build strong relationships with other projects in the area as well as with the local authorities.
Accountant	800	48	<ul style="list-style-type: none"> Standardize the finance and accounting systems of the project while maintaining compatibility with the IFAD accounting procedures. Prepare budget revisions of the project budgets and assist in the preparation of the annual work plans. Comply and verify budget and accounting data by researching files, calculating costs, and estimating anticipated expenditures from readily available information sources, in particular partner agencies. Prepare status reports, progress reports and other financial reports. Process all types of payments requests for settlement purposes. Prepare periodic accounting records by recording receipts, disbursements (ledgers, cash books, vouchers, etc) and reconciling data for recurring or financial special reports and assist in preparation of annual procurement plans. Undertake project financial closure formalities including submission of terminal reports, transfer and disposal of equipment, processing of semi-final revisions, and support professional staff in preparing the terminal assessment reports. Assist in the timely issuance of contracts and assurance of other eligible entitlements of the project personnel, experts, and consultants by preparing annual procurement plans.
International			
Natural Ressources Management/ Environnement/CC expert	11,900	4	<ul style="list-style-type: none"> Advise on integration of climate change adaptation objectives to ensure concordance with GEF procedures and requirements. Advise on M&E criteria and procedures for monitoring and estimating adaptation benefits and services, to ensure concordance (i) with other M&E procedures being developed and adopted in other international programs supported by the GEF, and (ii) with international, scientific, M&E standards Advise on project implementation and recommend adjustments as required. <p>Act as external reviewer of progress reports to ensure good scientific and technical quality, and agreement with standards required by the project.</p>
<p>Justification for travel, if any: Travel is required to cover field visits (field work, consultation ,planning, M&E and supervision etc.) and visits to Nouakchott to coordinate cross-cutting activities and synergies with other partners as well as for the coordination of project activities that will be implemented with MEDD.</p>			

For Technical Assistance	<i>\$/ Person week*</i>	<i>Estimated Person weeks**</i>	
Local			
Agronomists	832	28	<ul style="list-style-type: none"> - Inventory of best traditional agricultural practices - Preparation of technical factsheets on cultivation methods - Train farmers on improved seeds production and use - Training on the installation and management of the pilot irrigated farms - Train farmers on water storage tanks construction and implementation - Inventory of local knowledge - Restructuration of existing natural resources management of community organizations for better adaptation to climatic changes
Moderator	832	5	<ul style="list-style-type: none"> - Prepare, conduct and moderate a workshop on cultural itinerary for a group of pilot farmers
Participatory Rapid Rural Appraisal specialist	832	38	<ul style="list-style-type: none"> - Conduct RRA in villages
Animal science specialists	832	33	<ul style="list-style-type: none"> - Periodic livestock monitoring - Livestock technical and economic monitoring - Train farmers on CC-resilient livestock management, intensification of livestock practices, and on livestock cropping systems integration - Train farmers on livestock fodder treatment techniques and resilient fodder use and management
Mainstreaming climate change adaptation in Development Strategies	832	4	<ul style="list-style-type: none"> - Inputs to the adaptation mainstreaming process - Analysis works and recommendation on adaptation mainstreaming. - Lessons learned and up scaling (documentation, analysis etc). - Organize workshops on information, - Sensitization and training on agricultural production systems adaptation to climatic changes
Soil and conservation specialist	832	2	<ul style="list-style-type: none"> - Train farmers on soil and conservation and rehabilitation techniques that improve resilience to climate change in vulnerable sites
irrigation specialist	832	2	<ul style="list-style-type: none"> - Train farmers on resilient irrigated crop techniques and efficient irrigation management that reduces pressure on water resources
International	0	0	NA
Justification for travel, if any: This activity will require intensive field work (site visits, interaction with stakeholders etc.).			

* Provide dollar rate per person month . ** Total person months needed to carry out the tasks.

ANNEX D: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS

A. EXPLAIN IF THE PPG OBJECTIVE HAS BEEN ACHIEVED THROUGH THE PPG ACTIVITIES UNDERTAKEN.

The PPG objectives have been fully achieved: The PPG studies were undertaken and offered good basis for the design, consultations with government, stakeholders and partners were significant and have steered project formulation. Project documents were also produced in French to facilitate interaction with the government and have their comments on the project document prior to the submission.

B. DESCRIBE FINDINGS THAT MIGHT AFFECT THE PROJECT DESIGN OR ANY CONCERNS ON PROJECT IMPLEMENTATION, IF ANY:

No particular issues/risks were highlighted by the design team and the government during the design phase however during implementation there will be critical need for strong coordination between MEDD and PASK-II to efficiently implement and monitor project activities.

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

<i>Project Preparation Activities Approved</i>	<i>Implementation</i>	<i>Amount Approved</i>	<i>Amount Spent To-date</i>	<i>Amount Committed</i>	<i>Uncommitted Amount*</i>	<i>Co-financing</i>
Assessment of current crop production and livestock systems and their vulnerability to climate change	Completed	8175	5268	0	2907	8800
Climate Change vulnerability assessment of water resources and irrigation systems.	Completed	6925	5471	0	1454	7750
Assessment of capacity building and awareness needs in relation to climate change	Completed	5675	4053	0	1622	6300
Design and plan the adaptation strategy and develop a plan for M&E system.	Ongoing	30000	22797	7040	162	18000
Economic and financial analysis.	Completed	7600	3161	0	4439	3800
Stakeholders consultations.	Completed	5553	4962	0	591	18000
Travel	Completed	23500	14646	0	8854	10000
Translation	Completed	10000	0	18557	-8557	6000
Contingencies	Completed	2572	2572	0	0	4000
PPG management	Ongoing	0	0	0	0	33803
Total		100000	62930	25597	11472**	116453

* Any uncommitted amounts should be returned to the GEF Trust Fund. This is not a physical transfer of money, but achieved through reporting and netting out from disbursement request to Trustee. Please indicate expected date of refund transaction to Trustee.

****This is the balance at the submission. It will be confirmed once all encumbrances are expensed – IFAD will send any uncommitted funds to the Trustee once all PPG payments are cleared.**

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

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