



PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: FULL-SIZED PROJECT

THE LEAST DEVELOPED COUNTRIES FUND FOR CLIMATE CHANGE (LDCF)¹

Re-Submission Date: 17 June 2010

GEFSEC PROJECT ID²: 4234

GEF AGENCY PROJECT ID:

COUNTRY(IES): Senegal

PROJECT TITLE: Climate Change adaptation project in the areas of watershed management and water retention.

GEF AGENCY(IES): IFAD

OTHER EXECUTING PARTNER(S): Ministry of Agriculture, Ministry of Hydraulics & National Water System, and Ministry of the Environment, Nature Protection, Water Retention and Artificial Lakes

GEF FOCAL AREA: Climate Change Adaptation/LDCF

INDICATIVE CALENDAR (mm/dd/yy)	
Milestones	Expected Dates
Work Program (for FSP)	June 2010
CEO Endorsement/Approval	May 2011
Agency Approval Date	June 2011
Implementation Start	January 2012
Mid-term Review (if planned)	June 2014
Project Closing	January 2016

A. PROJECT FRAMEWORK

Project Objective: To increase the resilience of agricultural production systems and associated value chains to climate impacts on the water sector, by ensuring the supply and availability of water for agricultural use in a scenario of increasing climate change-induced water scarcity. By targeting a climate vulnerable resource key to sustain agriculture, the project will contribute to meet food security and rural livelihoods objectives that are undermined by the effects of climate change.

Project Components	Inv. TA, or STA ^b	Expected Outcomes	Expected Outputs	Indicative LDCF Financing ^a		Indicative Co-Financing ^a		Total (\$) c = a+b
				(\$ a)	%	(\$ b)	%	
1. Capacity building, awareness raising and knowledge management at national level.	TA	1. National stakeholders, policy makers and local stakeholders aware of climate change implications for agricultural production, Livestock and key value chains 2. Climate change mainstreaming into agriculture and water management policies 3. Lessons learned, captured and disseminated	<ul style="list-style-type: none"> - 5 training sessions for policy makers on the link between climate, agriculture (including livestock production) and water management undertaken - 3 policy briefs produced and 8 seminars (2 nationals and 6 locals) on climate change impacts on agriculture, livestock and water resources carried out - Awareness raising campaign undertaken at the local level to enhance understanding of climate change impacts on agricultural production systems and related response measures (with a focus on health aspects), particularly in relation to water management - Synergies with research centre fostered and 3 cooperation conventions established - 3 thematic studies on climate change mainstreaming undertaken in relation to crop production (including a study on drought resistant and improved varieties), livestock 	700.000	44	900.000	56	1.600.000

¹ This template is for the use of LDCF Adaptation projects only.

² Project ID number will be assigned initially by GEFSEC. If PIF has been submitted earlier, use the same ID number as PIF.

			<p>and water management, value chain development and IGAs.</p> <ul style="list-style-type: none"> - Training kits on agriculture and water sectors produced. - 20 Training sessions for water/agriculture technicians and extension agents (about 200 people trained) - Knowledge base on climate change, agriculture and water created - South-South exchange visit undertaken (1 visit for 4 senior policy makers and 4 technicians) - Lessons learned , collected and disseminated through relevant networks (e.g., Adaptation Learning Mechanism, UNFCCC Local Coping Strategies database, IFAD FIDAFRIQUE, and fora (UNFCCC COP and LEG) 					
2. Water harvesting and watershed management	INV	<ol style="list-style-type: none"> 1. Reduced stress of climate change impact on water resources and production systems through surface water capturing and sustainable management 2. Increased opportunity to diversify production systems in a context of increasing climate change-induced weather –related stresses (10 communities) 	<ul style="list-style-type: none"> - 15 water retention basins (approx. 200 000m³ each) mobilized - 50 silting-up (colmatage) operations on existing water retention basins - Technical capacity building for stakeholders on maintenance of basin, 30 technicians trained on maintenance and silting-up. - Integrated management of ecosystem services and water undertaken (approximately 150 ha) - Non-crop based IGAs in 10 communities promoted (i.e. aquaculture, pisciculture) 	2.200.000	37	3.800.000	63	6.000.000
3. Water conservation and efficient irrigation	INV	<ol style="list-style-type: none"> 1. Efficient use of more scarce water (as a consequence of climate change) through improved irrigation systems 2. Community-based awareness raising on water-use and irrigation management in a climate change context 	<ul style="list-style-type: none"> - Forage associations supported to adopt water efficient technologies based on local context specificities - About 250 ha managed for sustainable irrigation, involving approx. 30 communities - 20 associations and 30 communities sensitized. - Installation of 15 improved wells for small-scale irrigation in selected sites 	1.300.000	32	2.800.000	68	4.100.000
4. Monitoring and Evaluation		<ol style="list-style-type: none"> 1. Project impact is systematically monitored against the baseline. 	<ul style="list-style-type: none"> - Project database on indicators and achievements established and updated - Project progress reports 	300.000	39	475 000	61	775.000

		2. Project evaluations are undertaken in timely manner and lessons fed into implementation.	<ul style="list-style-type: none"> - produced - Project evaluation reports produced - Lessons learned collected - 1 GIS established and updated - Water resource vulnerability map created and updated - Assessment of water quantity and quality carried out and related health indicators monitored 					
5. Project management				500.000	37	850.000	63	1.350.000
Total project costs				5.000.000		8.825.000		13.825.000

^a List the \$ by project components. The percentage is the share of LDCF and Co-financing respectively to the total amount for the component.

^b TA = Technical Assistance; STA = Scientific & Technical Analysis

B. INDICATIVE CO-FINANCING FOR PROJECT BY SOURCE AND BY NAME
(in parenthesis) if available, (\$)

Sources of Co-financing	Type of Co-financing	Project
Project Government Contribution	Unknown at this stage	600.000
GEF Agency(ies)	cash	7.925.000
Others	In-kind	300.000
Total co-financing		8.825.000

C. INDICATIVE FINANCING PLAN SUMMARY FOR THE PROJECT (\$)

	Previous Project Preparation Amount (a) ³	Project (b)	Total c = a + b	Agency Fee
LDCF		5,000,000*	5,000,000	500,000
Co-financing		8,825,000	8,825,000	
Total	0	13,825,000	13,825,000	500,000

* Excluding PPG funding

D. FOR MULTI AGENCIES/COUNTRIES (IN \$)¹

GEF Agency	Country Name	(in \$)		
		Project (a)	Agency Fee (b) ²	Total (c) c=a+b
(select)				
(select)				
Total LDCF Resources		0	0	0

¹ No need to provide information for this table if it is a single country and/or single GEF Agency project.

² Relates to the project and any previous project preparation funding that have been provided and for which no Agency fee has been requested from Trustee.

³ Include project preparation funding that were previously approved and exclude PPGs that are awaiting for approval.

PART II: PROJECT JUSTIFICATION

A. STATE THE ISSUE, HOW THE PROJECT SEEKS TO ADDRESS IT, AND THE EXPECTED ADAPTATION BENEFITS TO BE DELIVERED:

Senegal is on the western-most part of the bulge of Africa and includes desert in the north and a moist, tropical in the south. About 75% of Senegal's population is rural. This population is highly dependant on natural resources. Recent climate change impacts have placed a lot of stress and pressure on these resources, leading to increased ecosystem and land degradation. Rural poor people in the country are already vulnerable to non-climate stressors. As a result of climate change they have become poorer and more vulnerable.

Key pillars of the Senegalese economy are constantly threatened by climate change, namely water resources, agriculture and coastal areas. 70 % of the Senegalese workforce is directly dependant on these pillars, working in fisheries, agriculture, tourism, livestock and many other fields, and this greatly affects the country's GDP and economic growth.

Scientific climate studies carried out in Senegal have demonstrated that water resources are the most vulnerable natural resources in the country. A warming of temperature of 2 to 4 degrees C is to be expected in that region, leading to a 5 to 25% drop in precipitations amounts. Groundwater resource levels, which have already decreased, will continue to be negatively affected by climate change impacts. The rural populations are the most vulnerable to suffer from such decreases in water availability and quality, as their ability to secure food and rural livelihoods depends on water availability and agricultural production.

LDCF / NAPA Implementation proposal

The main objective of the proposed IFAD/LDCF project is to increase the resilience of agricultural production systems and associated value chains to climate impacts in the water sector, by ensuring the supply and availability of water for agricultural use in a scenario of increasing climate change-induced water scarcity. By targeting a climate vulnerable resource key to sustain agriculture, the project will contribute to meet food security and rural livelihoods objectives undermined by the effects of climate change.

The IFAD / LDCF intervention will be articulated around five components:

1. Capacity building, awareness raising and knowledge management at national level
2. Water-harvesting and watershed management
3. Water conservation and efficient irrigation
4. Monitoring and evaluation
5. Project management

Component 1: *Capacity building, awareness raising and knowledge management at national level.* This component will target national stakeholders, policy makers and local-level actors, to create awareness on the implications of climate change on agricultural production and pastoral farming, as well as on key value chains. To this effect, 5 training sessions on the link between climate change, agriculture, livestock and water management will be organized for policy makers. Impacts on rural livelihoods will be also considered, including health-related impacts. In addition, three policy briefs will be produced and 8 seminars carried out on climate change impacts on agriculture, pastoral farming and water resources at both national and local level. Synergies with relevant research centers will be strengthened, leading to the establishment of three cooperation conventions. This component will also aim to mainstream climate into agriculture, water management policies and strategies at national and local levels, by initiating three thematic studies on climate change impacts in relation to: (i) agriculture, including drought-resistant and improved crop varieties, and livestock; (ii) water management; (iii) value chain development and IGAs. Furthermore, training kits on agriculture and water will be produced, and training sessions will be organized for water and agriculture technicians. Particular attention will be given to water management and efficiency, but also related issues such as health aspects will be considered. As a result of these activities, about 200 technicians will be trained on climate-proofed water management. Finally, this component will also aim to generate, collect and disseminate knowledge and lessons learnt from the project. To this effect, a knowledge base on climate change, agriculture, and water will be created. Furthermore, south-south exchange visits for senior policy makers and technicians will be undertaken. Lastly, the lessons learned from this endeavor will be disseminated through relevant fora and networks, such as the UNFCCC Local Coping Strategies database, the Adaptation Learning Mechanism and FIDAFrique, IFAD's regional network for Western and Central Africa. The expected adaptation benefits from this intervention include the following: (i) better understanding of climate change implications for agriculture, livestock systems and water management for senior policy makers and other stakeholders at national and local levels; (ii) integration of climate change issues into agriculture and water-management policies; (iii) increased knowledge dissemination and awareness of the links between climate change, water resources and agricultural production

Component 2: Water-harvesting and watershed management. This component will aim to reduce the climate change impacts on water resources and production systems that depend on water availability and quality. The proposed activities focus on capturing surface water and sustainable management of water resources. The Government of Senegal has recognized the importance of creating water retention basins as a way to harvest and use surface water efficiently. This option is particularly relevant for smallholders that are better served by these techniques than large-scale producers. In more details, 15 water retention basins will be established, with an average retention capacity of 200,000 m³ per basin depending on the technology used and location⁴. In addition, approximately 50 silting up (*colmatage*) operations will be carried out on existing water retention basins. In parallel, technical capacity building will also be provided for stakeholders on basin maintenance and silting-up. The above technical solutions will be accompanied by landscape and ecosystem services management to prevent and/or reduce the degradation of ecosystems and their services while increasing water retention demand. These activities will target in total approximately 150 ha. An integrated approach to watershed management at landscape level that includes a sustainable balance between ecosystem services maintenance and water harvesting for agricultural purposes will be defined and the related activities will be articulated at project formulation.

This component will also explore opportunities to diversify the production systems as an adaptation option to reduce the economic vulnerability to climate change of rural populations, as well as to minimize possible impacts on food security. The target for this activity is 10 communities, in which aquaculture and fish farming will be promoted on a small scale pilot basis. A thorough assessment of the potential to develop aquaculture and fish farming, including a risk analysis, will be undertaken during project formulation. Potential climate change risks on the development of these activities will be also considered during formulation. The expected adaptation benefits of this component are: (i) enhanced adaptive capacity of water resources and production systems stakeholders; (ii) the initiation of concrete adaptation-oriented projects, namely water-retention basins; (iii) increased technical capacity of local technicians to maintain adaptation-oriented facilities, namely water-retention basins.

Component 3: Water Conservation and efficient irrigation. This component will aim to use scarce water more efficiently, through improved irrigation systems. Considering that water availability is expected to decline as a consequence of climate change, the establishment of water-harvesting systems for irrigation would not be sufficient alone to ensure that irrigation needs are met. The promotion of water efficiency will be crucial to ensure that water resources are sustainably managed in the context of increased climate-induced water scarcity. Water conservation and water efficient technology will be selected and defined on the basis of the local context and site characterization. Support will be provided to forage associations to sustainably manage land and irrigated areas, as well as to adopt the most locally suitable technology. As a result of the activities undertaken through this component, about 250 ha of agricultural land will use drip irrigation and/or other appropriate and cost-effective technology, benefiting approximately 30 communities in the project area. Furthermore, awareness-raising on water-use and irrigation management will be carried out targeting 20 associations and 30 communities. Lastly, improved wells will be installed in appropriate (technically and financially) locations, supporting the overall effort of this component to use scarce water more efficiently. The expected adaptation benefits of this component are: (i) enhanced adaptive response to water scarcity through adaptive irrigation and water-saving techniques; (ii) enhanced knowledge of water-use and irrigation management, in a context of water scarcity and climate change.

Component 4: Monitoring and Evaluation. This component will promote activities aiming to ensure that the project impact is systematically monitored against the baseline and that evaluations of the project are undertaken in a timely manner to inform the project implementation. Also, lessons learned will be regularly incorporated during project implementation. Equipment for effective monitoring of adaptation progresses will be provided and reports and evaluations will be produced. Monitoring of water resources will allow assessing the variation induced by climate change on both quantity and quality, against selected indicators, as well as the associated health risks. A GIS will also be established and updated including a water resource vulnerability map characterizing the project area.

B. DESCRIBE THE CONSISTENCY OF THE PROJECT WITH NATIONAL PRIORITIES/PLANS: Climate change is a priority for the Government of Senegal, as well as sustainable development and poverty alleviation. Senegal signed the United Nations Framework Convention on Climate Change (UNFCCC) in 1992, and ratified it in 1994. Senegal is also a signatory to the Kyoto Protocol since 2001. Senegal participates actively in the Convention process to bring the concerns of Africa to the negotiations. Recently, it established a National Climate Change Committee and joined others in ensuring that the African Ministerial Conference on Environment included climate change as one of the priority areas in the New Partnerships for Africa's Development (NEPAD). The current proposal supports the implementation of water resources-related adaptation priorities as identified by the Government in its climate-related national policies and plans. The Initial National Communication to the UNFCCC (1997) and its annexed implementation strategy already recognized water resources as a key sector for short to mid-term intervention to address the impacts of climate change. Also, the National Adaptation Programme of Action (NAPA) of Senegal submitted to the UNFCCC in 2006 lists the water sector as a key priority for adaptation to climate change in the country. More specifically, the NAPA identifies improved water retention capacity and increased irrigation efficiency as key activities to

⁴ Water retention basins have been estimated assuming an extension of maximum 3 ha each. The actual size and retention capacity of the basins will be further examined during project formulation. It will depend on the identified project sites and local context feasibility.

counteract the effects of climate change on water resources. The NAPA also clearly identifies the links between climate change-induced water shortage and/or groundwater depletion and the increased risks of reduced agricultural production and food insecurity. Further associated risks are land degradation, reduced income generation opportunities, loss of biodiversity, etc. In 2009, the Government further detailed the type of activities to be supported and revised the costs associated to adaptation activities related to watershed management and water resources efficiency. This was done to reflect the increase in the adaptation costs occurred from the NAPA completion and its implementation. Communication of the revision of the water sector-related project profile was sent to the UNFCCC Secretariat on October 16, 2009 (enclosed). The adaptation priorities identified in the project profile contained in Annex I served as basis to develop the present proposal.

- C. DESCRIBE THE CONSISTENCY OF THE PROJECT WITH LDCF/SCCF ELIGIBILITY CRITERIA AND PRIORITIES:** In line with the LDCF criteria for project proposal, the IFAD-supported NAPA implementation proposal is country-driven and responds to key Government's priorities for climate change adaptation. In line with the LDCF additionally principle, the identified activities are additional to baseline interventions and are based on the indications contained in the NAPA and other relevant climate-related policies and strategies. Consultation with the Government has been made in respect of the principle of country ownership. GEF/LDCF criteria for project design and co-financing have been respected. Project management costs represent 10% of total LDCF requested budget and co-financing ratio fulfills LDCF criteria. Also, adaptation benefits have been clearly defined. Finally, the project takes into account other ongoing activities in the country to ensure coordination and synergies on the ground (see section D below).
- D. OUTLINE THE COORDINATION WITH OTHER RELATED INITIATIVES:** This project is presented within the context of the NAPA implementation in Senegal. It focuses on the priorities that have been identified throughout the NAPA consultations. Furthermore, in its wider context, this project will contribute to adaptation through linkages with two major initiatives in Senegal: (i) The Green Wall Initiative and (ii) the eco-villages project. The proposed intervention is focused on in-the-ground investments and will be carried out in a way that mainly harmonizes with these two initiatives among other relevant activities that are carried out in relation to sustainable development and adaptation the country. By promoting water retention basins and integrated management of ecosystem services, the project will establish operational linkages with the Green Wall Initiative (The Green Wall water initiative entails the construction of 80 retention basins per country). Similarly, given this project's consistency with the eco-villages initiative (i.e. promotion of non-crop income generating activities, such as aquaculture, etc.; efficient irrigation and water conservation, combined with sustainable agricultural practices) further possible linkages will be explored during the PPG phase in order to ensure that this NAPA project strategically contributes to the wider sustainable development agenda in the country.

Many other initiatives in the country focus on drinking water and sanitation sectors, mostly in urban areas. These have been supported by a number of actors, which include the WB/IDA, UNDP, Agence française de développement (AFD), European Commission and the African Development Bank. With a focus on rural areas of Senegal, the latter has supported a project entitled Rural water supply and sanitation initiative (the second phase started in 2009) with a main focus on drinking water and sanitation infrastructure. In the area of irrigated agriculture, AFD has supported the a number of projects with the objective of exploiting the Senegal River Valley area's high agricultural potential, in order to alleviate poverty, support food security and improve living conditions for populations. Lessons learned from the FAO supported activities focusing on small-scale irrigation in the Groundnut Basin will be also feeding into the implementation of the present project. In terms of climate change adaptation, the project formulation will benefit from the GEF/WB study on Regional Climate, Water and Agriculture, that analyses the impacts on and adaptation of agro-ecological systems in Africa, including Senegal, and from the studies to better understand the impacts of climate change in Senegal undertaken through the Netherlands Climate Assistance Programme. The latter also provided technical and financial assistance to strengthen Senegal's national capacity to prepare formulation and implement strategies in response to climate change. In the area of capacity building, a DFID/LEAD project aims to increase the capacity of communities in Africa (Senegal is among the beneficiaries) to increase their resilience to climate change impact in Africa by strengthening community networks, supporting technical best practices and influencing key decision makers. The lessons and achievements reached through these initiatives will be taken into account in the implementation of this IFAD/LDCF project.

- E. DESCRIBE ADDITIONAL COST REASONING:** Most of the business as usual rural development interventions, despite recognizing climate change as a possible risk to the achievement of development objectives, are built on the assumption that no severe climatic or other natural shocks will affect the performance of the supported activities. The Government of Senegal is currently implementing with the support of IFAD a Value Chain Support project that will serve as baseline and co-financing for the LDCF adaptation intervention. The rationale for additionality is explained by the fact that baseline activities do not tackle directly climate change impacts on agricultural production. In a business as usual scenario, the main goal of agricultural-related intervention aim to increase productivity and achieve food security and development objectives without considering that their achievement may be limited or hampered by the effects of climate change. The Value Chain Support project aims primarily to improve the incomes and livelihoods of farm families by integrating them into diversified and profitable value chains. The IFAD/LDCF intervention will aim to ensure that these objectives are achieved even in presence of increased climatic stress on

water resources that are critical to sustain agricultural production. In more details, the baseline activities target smallholders, including the poorest ones, to develop profitable economic activities and establish effective links between producers' organizations and market operators. Under the assumption that no severe climatic shocks will take place, the development impact in terms of food security and rural development of the supported initiatives risks to be lower and more costly than expected. Thus, the proposed LDCF-supported intervention will reduce climate-induced risks of losses on agricultural production and will ensure that food security and livelihood diversification objectives are achieved even in a context of increased climatic stress. The table below summarizes the additional nature and associated adaptation benefits of the IFAD/LDCF intervention against the baseline activities.

	BASELINE	ADAPTATION SCENARIO	
		ADDITIONAL ACTIVITIES	ADAPTATION BENEFITS
1. Capacity building, awareness raising and KM	The main actors involved in capacity building activities both at national and local levels are supported to access market information and meet with national level stakeholder to formulate recommendations for Government Policies. The focus is on how to increase production needs and on the creation on an enabling environment for value chain promotion, but climate change is not addressed as a key constraint for value chains development.	Capacity building on climate change, agriculture, pastoral systems and water resources is promoted. Key actors at different levels are targeted (government, technicians, extension services) and attention is paid to show the link between climate change impacts on water resources and socio-economic implications for rural livelihoods (agricultural production, income, rural migration, etc). Beneficiaries are aware of adaptation responses available in relation to crop production (including drought-resistant and improved varieties), livestock and water efficiency.	<ul style="list-style-type: none"> - Better understanding of climate change implications for agriculture, livestock, water management for senior policy makers and other stakeholders at national and local levels. - Integration of climate change issues into agriculture and water-management policies. - Increased knowledge dissemination and awareness of the links between climate change, water resources, and agricultural production.
2. Water harvesting and watershed management infrastructure	Non-water related collective infrastructure is promoted and investments focus on removing key marketing constraints in value chains. Key infrastructures include market, storage, processing facilities, as well as the rehabilitation of irrigated areas. However, the potential risk of reduced water availability and the potential consequences on the use of the other infrastructures are not addressed.	Through this component, the LDCF intervention will aim to ensure that critical water retention and watershed management infrastructures are mobilized and maintained in the long run, as a way to minimize the risks associated with climate impacts on water resources. The creation of retention basins can also offer opportunities for non-crop based income diversification opportunities. With the aim to ensure the maintenance and sustainability of the investments, the project will promote an integrated approach to watershed and ecosystem management	<ul style="list-style-type: none"> - Enhanced adaptive capacity of water resources and production systems. - The initiation of concrete adaptation-oriented projects, namely water-retention basins. - Increased technical capacity of local technicians to maintain adaptation-oriented facilities, namely water-retention basins. - Ecosystem services are managed sustainably and in a complementary manner to the development of the adaptation-centered water retention and management infrastructures.
3. Water conservation and efficient irrigation	Agricultural diversification and marketable production are supported through both access to credit and micro-finance and irrigation systems. Improved seed varieties are foreseen as a climate risk mitigation option, however, the baseline activities do not consider the importance of ensuring an efficient use of water resources in a context of increased climate-induced water scarcity.	The IFAD/LDCF intervention focuses on water efficiency and sustainable use as a way to cope with decreased water resources availability. The proposed activities entail the support to communities through forage associations, the promotion of drip irrigation and/or other appropriate technology to increase water efficiency as a fundamental action to cope with increased water scarcity and drought. Also, the project will conduct targeted awareness on water use and irrigation management in the context of increased climate variability	<ul style="list-style-type: none"> - Enhanced adaptive response of agricultural production systems to water scarcity through adaptive irrigation and water-saving techniques. - Enhanced knowledge on sustainable water-use and irrigation management, as a way to ensure water efficiency in a context of increased water scarcity due to climate change.
4. Monitoring and evaluation	BAU M&E does not entail any specific elements that deal with the assessment of climate variability or the adaptive capacity	This component will promote activities aiming to ensure that the project impact in terms of adaptation is	To monitor adaptation progresses, reports and evaluations will be produced; also, a water resource

to the increasing risks of climate change and their impacts on rural livelihoods and food security.

systematically monitored against the baseline and that evaluations of the project are undertaken in a timely manner to inform the project implementation. Also, lessons learned will be regularly incorporated during project implementation.

vulnerability map will be created, including associated health risks indicators, and a GIS established and updated. This will offer better understanding and provides analytical tools for adaptation and decision making and project implementation

F. INDICATE THE RISK THAT MIGHT PREVENT THE PROJECT OBJECTIVE(S) FROM BEING ACHIEVED AND OUTLINE RISK MITIGATION MEASURES:

A possible constraint is represented by the limited facilities to provide adequate technical support at both national and community levels. For this reason, the project will link and build on the achievements of climate change-adaptation capacity building efforts already undertaken in the country. Also, particular attention will be given to ensure coordination with other ongoing agriculture-related activities in the country to avoid possible overlaps and/or duplications. The full involvement of the local communities in the project activities is an additional challenge. However, the link with the community-based activities undertaken through the Value Chain Support Project and its good outreach should reduce this risk and ensure adequate participation rate.

G. DESCRIBE, IF POSSIBLE, THE EXPECTED COST-EFFECTIVENESS OF THE PROJECT:

The link of the LDCF component with the IFAD-supported Value Chain Support project ensures cost-effectiveness by allowing for: (i) a common management structure that will contribute at reducing the transaction costs; (ii) a single M&E framework and (iii) reduced risks of overlapping with other activities and increased on the ground synergies . The proposed LDCF operation also focuses on investment and impact on the ground and during its formulation the project will be designed in view of an optimum level of investment that ensures maximum impact on people livelihoods and their ability to cope with the increasing risks posed by climate variability and change. Activities such as drip irrigation are proven to be particularly cost-effective. A test run in Senegal with this technology on different crop varieties showed an average production of approximately 22 T/ha. At an average price of 0.50 USD/Kg, the expected revenue would be about 11.000 USD/ha. At front of an initial investment of about 3.700 USD/ha the margin of profit corresponds to about 7.300 USD/ha (i.e. the benefit is almost double than the investment).

The project will also work towards targeted capacity building and improving the necessary elements i.e. (data collection, impact mapping, and vulnerability assessment at key investment sites) to better target the investment. The project will be fully integrated in a development project to ensure that adaptation benefits are mainstreamed in an efficient way. Further elements of cost-effectiveness will be assessed and detailed during project formulation.

H. JUSTIFY THE COMPARATIVE ADVANTAGE OF GEF AGENCY:

IFAD is already present with several rural development projects in Senegal. Since 1979, IFAD has launched 14 rural development projects in Senegal, totaling 148,5 million dollars. This cooperation intensified in the '90s. The main focus of IFAD's project is on rural development, food security and the protection of natural resources critical to sustain agricultural production. To date, IFAD's ongoing portfolio in the country comprises six projects for a total of USD 131.76 million. The primary objective of IFAD is to help Senegal reach its Millennium Development Goals, and in particular the first objective, reducing poverty by half by 2015. To this effect, IFAD supports local initiatives that aim to improve rural economies and quality of life, through capacity-building, participatory action, better management and knowledge sharing. Also as an IFI IFAD's operations focus on in-the-ground investments that respond to demand from its target group which would add value in reaching impacts and translating the NAPA into concrete investments.

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 country endorsement letter(s) or regional endorsement letter(s) with this template).

NAME	POSITION	MINISTRY	DATE
Ndiaye Cheikh Sylla	Directeur de l'Environnement et des Etablissements Classés	Ministry of the Environment, Nature Protection, Water Retention and Artificial Lakes	

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF policies and procedures and meets the GEF criteria for project identification and preparation.

Agency Coordinator. Agency name	Signature	Date	Project Contact Person	Telephone	Email Address
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Please do not forget to copy the IFAD/GECC Registry on official communications: GECCRegistry@ifad.org