



# PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: FULL-SIZED PROJECT

TYPE OF TRUST FUND: LDCF

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## PART I: PROJECT IDENTIFICATION

<b>Project Title:</b>	Mainstreaming ecosystem-based approaches to climate-resilient rural livelihoods in vulnerable rural areas through the Farmer Field School methodology		
<b>Country(ies):</b>	Senegal	<b>GEF Project ID:<sup>1</sup></b>	5503
<b>GEF Agency(ies):</b>	FAO	<b>GEF Agency Project ID:</b>	625461
<b>Other Executing Partner(s):</b>	Ministère Agriculture et Equipement Rural (MAER); Ministère de l'Environnement et du Développement Durable (MEDD); Agence Nationale de l'Aviation Civile et de la Météorologie du Sénégal (ANACIM); Centre de Suivi Ecologique (CSE)	<b>Submission Date:</b>	September 17, 2013
<b>GEF Focal Area (s):</b>	Climate Change	<b>Project Duration (months):</b>	48
<b>Name of parent program (if applicable):</b> • For SFM/REDD+ <input type="checkbox"/> • For SGP <input type="checkbox"/> • For PPP <input type="checkbox"/>		<b>Agency Fee (\$):</b>	606,005

## A. FOCAL AREA STRATEGY FRAMEWORK<sup>2</sup>:

Focal Area Objectives	Trust Fund	Indicative Grant Amount (\$)	Indicative Co-Financing (\$)
CCA – 1 (Outcome 1.1 – Output 1.1.1)	LDCF	900,000	3,600,000
CCA – 2 (Outcome 2.1 – Output 2.1.2)	LDCF	900,000	3,000,000
CCA – 2 (Outcome 2.2 – Output 2.2.1)	LDCF	1,500,000	4,500,000
CCA – 2 (Outcome 2.2 – Output 2.2.2)	LDCF	1,400,000	4,500,000
CCA – 3 (Outcome 3.1 – Output 3.1.1)	LDCF	534,000	2,300,000
CCA – 3 (Outcome 3.2 – Output 3.2.2)	LDCF	700,000	2,000,000
Sub-Total		5,934,000	19,900,000
Project Management Cost		294,995	995,000
<b>Total project costs</b>		<b>6,228,995</b>	<b>20,895,000</b>

## B. PROJECT FRAMEWORK

<b>Project Objective:</b> To enhance the capacity of Senegal's agropastoral sector to develop more climate-resilient production systems and mainstream integrated Climate Change Adaptation (CCA) strategies into on-going agropastoral and agricultural development policies and programmes						
Project Component	Grant Type <sup>3</sup>	Expected Outcomes	Expected Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative Co-financing (\$)
1. Developing/fine-tuning CCA strategies and tools based on	TA	1.1 Increased understanding and capacities to systematically gather and disseminate climate	1.1.1. A joint CSE-MA-ME assessment of climate change (CC) threats, opportunities and constraints and	LDCF	750,000	3,200,000

<sup>1</sup> Project ID number will be assigned by GEFSEC.

<sup>2</sup> Refer to the reference attached on the Focal Area Results Framework and LDCF/SCCF Framework when completing table A.

<sup>3</sup> TA includes capacity building and research and development.

improved knowledge and information management and piloting improved CCA practices in agricultural and pastoral production systems		<p>related data as the basis for CCA practices building on better knowledge of inter-dependence between agropastoral and agricultural production systems and of CC-induced threats on both sectors in targeted vulnerable areas</p> <p>1.2 Fine-tuned and piloted agroecosystems-specific strategies for increasing CC resilience to be scaled up, including optimal use of dryland crop genetic resources and rangelands species in three agro-ecological zones of Senegal following a climatic gradient: nord bassin arachidier; zone sylvo pastorale; zone du Sénégal Oriental, vallée du fleuve Sénégal and Casamance</p>	<p>identification of key strategic elements for an integrated approach to CCA</p> <p>1.1.2. Information management tools/systems (including monitoring of vegetative stages and water availability, carrying capacity of dry rangelands and flooding plains, herd displacement tracking, etc.) developed and operating</p> <p>1.2.1. Rangeland management plans, local "chartes pastorales" and livestock feeding strategies formulated involving farmers and herders' associations and groups and customary organizations</p> <p>1.2.2. Good operational practices and "lessons learned" for enhanced adaptation to climate risk of the agricultural and pastoral sectors are analyzed and selected to be disseminated and replicated at national level in support of sound CCA policy making and programming</p>			
2. Capacity building and up-scaling of CCA strategies, technologies and best practices for small farmers and agropastoralists through a growing network of FFS/APFS	TA	2.1. Increased capacity of farmers and agropastoralists based on systematized information/knowledge to adopt improved CCA strategies and practices through a network of Farmer Field Schools (FFS) and Agropastoral Field Schools (APFS); 20% of the crop and pasture areas assisted by potential partner programs incorporate improved CCA strategies, practices and genetic materials, leading to more resilient production systems	<p>2.1.1. A core of national program managers have the potential for mainstreaming CCA in rural development, using the FFS/APFS approaches, through field and institutional visits to neighboring countries where up-scaling is already taking place</p> <p>2.1.2. Specific curricula focusing on CCA, ecosystem resilience and integration between agricultural and pastoral production</p>	LDCF	3,900,000  1,700,000	12,600,000  3,500,000

			<p>systems developed and applied in participating FFS/APFS</p> <p>2.1.3. At least 6 community-based organizations with 12,500 farmers and 12,500 agropastoralists benefit from participatory education services for CCA , 500 FFS/APFS facilitators trained in CCA and ecosystem resilience strategies and practices, 1,250 FFS and APFS operating, and 750 producers multiplying locally adapted seeds for distribution through the FFS/APFS network</p>			
	INV	2.2 Improved crops and beef production value chains through a landscape and key cash crops approach to increase household revenue and capital accrual among FFS/APFS participants	<p>2.2.1. One community-based organization in each ecological area (2000 farmers and pastoralists) benefits from improved new technologies for CCA and resilience, valorization of localized food systems, and improved beef production value chains through a landscape approach along a select number of transhumance routes</p> <p>2.2.2. New CC-adapted cereal varieties (millet, maize, rice) introduced in 3 ecological areas to increase food security in the framework of CC and sustainable management of forage resources, and fodder banks protected using selected improved species and varieties based on agro-ecological zones</p> <p>2.2.3. 30% of farmers and agropastoralists improve their crop and livestock production revenue by 25%</p>	2,000,000	8,300,000	
	TA	2.3 Use of climate information reinforced at provincial/local levels and in FFS networks for	2.3.1. 30% of farmers and agropastoralists in selected areas aware of and have mastered the	200,000	800,000	

		forecasting agricultural production and to increase production, thus reducing food insecurity during climate shocks	use of agroclimatic information			
3. Mainstreaming CCA strategies in a coordinated manner in agricultural and animal production development frameworks at country level and in selected vulnerable areas	TA	<p>3.1. Increased institutional capacity at national level to develop CCA policies, strategies and supporting programs to FFS/APFS, shifting from a reactive response to a pro-active preparedness approach (measured by respective evolution of adaptation/preparedness and emergency programs, projects and budgets) with CCA strategies mainstreamed into 50% of agricultural and pastoral sector policies, programs and planning (30% of operational projects in sector-level programs incorporate budget for CCA components)</p> <p>3.2 A "local CC resilience fund" in place supporting CC adaptation activities and mobilizing twice the initial GEF/LDCF contribution by year 3</p>	<p>3.1.1. Increased CCA understanding and lessons learned mainstreamed into awareness-raising modules for policy-makers on integrated strategies for CCA, linking the agricultural and pastoral sectors in the framework of sustainable land management approaches and identifying gaps and opportunities of the FFS/APFS approach</p> <p>3.1.2. Inter-sectoral task force in place/strengthened in the framework of CSE mandate, defining integrated CCA agendas and tailoring them into sector-level programming and mechanisms improved for cross-sector coordination in the implementation of integrated management and outreach strategies for CCA</p> <p>3.2.1. Draft investment plan available in support of CCA mainstreaming and up-scaling in the agricultural/agropastoral sector in complement to existing investment plans</p>	LDCF	850,000	3,300,000
4. Project monitoring and evaluation	TA	4.1 Project implementation based on results-based management and application of project lessons learned in future operations facilitated	<p>4.1.1. Project monitoring system operating, providing systematic information on progress in meeting project outcomes and output targets</p> <p>5.1.2. Timely biannual project progress reports available for adaptive and results-based management</p> <p>5.1.3. Mid-term and final evaluation conducted</p>	LDCF	434,000	800,000

Sub-Total		5,934,000	19,900,000
Project management Cost (PMC) <sup>4</sup>	LDCF	294,995	995,000
<b>Total project costs<sup>4</sup></b>		<b>6,228,995</b>	<b>20,895,000</b>

### C. INDICATIVE CO-FINANCING FOR THE PROJECT BY SOURCE AND BY NAME IF AVAILABLE, (\$)

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
National Government	Ministère Agriculture et Equipement Rural through its "projets sous tutelle" financed by AfDB	In kind	2,000,000
National Government	Ministère Agriculture et Equipement Rural through its "projets sous tutelle" financed by IFAD	In kind	5,000,000
National Government	Presidency of the Government of Senegal through its "projets sous tutelle" financed by USA Millennium Challenge Compact	Grant	5,000,000
National Government	Ministère de l'Ecologie et la protection de la nature through its "projets sous tutelle" financed by AfDB and IsDB and also the expertise of technicians from CSE and ANACIM equipments	In kind	7,895,000
GEF Agency	Canada through FAO	Grant	500,000
GEF Agency	Spain through FAO	Grant	500,000
<b>Total Co-financing</b>			<b>20,895,000</b>

### D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY, FOCAL AREA(S) AND COUNTRY<sup>1</sup>

GEF Agency	Type of Trust Funds	Focal Area	Country Name/ Global	Grant Amount (\$ (a)	Agency Fee (\$ (b) <sup>2</sup>	Total (\$ c=a+b
FAO	LDCF	Climate Change	Senegal	6,228,995	606,005	6,835,000
<b>Total Grant Resources</b>				<b>6,228,995</b>	<b>606,005</b>	<b>6,835,000</b>

<sup>1</sup> In case of a single focal area, single country, single GEF Agency project, and single trust fund project, no need to provide information for this table. PMC amount from Table B should be included proportionately to the focal area amount in this table

<sup>2</sup> Indicate fees related to this project.

### E. PROJECT PREPARATION GRANT (PPG)<sup>5</sup>

Please check on the appropriate box for PPG as needed for the project according to the GEF Project Grant:

Amount  
Requested (\$)

Agency  
Fee for  
PPG (\$)<sup>6</sup>

- No PPG required
- (Upto) \$50k for projects up to & including \$ 1 million
- (Upto) \$100k for projects up to & including \$ 3 million
- (Upto) \$150k for projects up to & including \$ 6 million
- (Upto) \$200k for projects up to & including \$ 10 million
- (Upto) \$300k for projects above \$ 10 million

### PPG AMOUNT REQUESTED BY AGENCY (IES), FOCAL AREA(S) AND COUNTRY(IES) FOR MFA AND/OR MTF PROJECT ONLY

Type of Trust	GEF Agency	Focal Area	Country Name/ Global	PPG (\$ (a)	Agency Fee (\$)	Total (\$)
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<sup>4</sup> To be calculated as percent of subtotal

<sup>5</sup> On exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

<sup>6</sup> PPG fee percentage follows the percentage of the GEF Project Grant amount requested.

<b>Funds</b>					<b>(b)</b>	<b>c=a+b</b>
GEF TF	FAO		Senegal	150,000	14,250	164,250
<b>Total Grant Resources</b>				<b>150,000</b>	<b>14,250</b>	<b>164,250</b>

## **PART II: PROJECT JUSTIFICATION<sup>7</sup>**

### **A. PROJECT OVERVIEW**

**A.1. Project description.** Briefly describe the project, including: 1) the global environmental problems, root causes and barriers that need to be addressed; 2) baseline scenario and any associated baseline projects; 3) the proposed alternative scenario, with a brief description of expected outcomes and components and the project; 4) incremental cost reasoning and expected contributions from the baseline, the GEFTE, LDCF/SCCF and co-financing; 5) global benefits (GEFTE, NPTF) and adaptation benefits (LDCF/SCCF); 6) innovativeness, sustainability and potential for scaling up.

#### **1) The global environmental problems, root causes and barriers that need to be addressed**

Senegal is located at the western tip of Africa, between 12.5 and 16.5 °N latitude, covering an area of 196,712 km<sup>2</sup>. It is bounded to the north by Mauritania, to the east by Mali, south by Guinea Bissau and Guinea and west by the Atlantic Ocean. It is ranked among the world's poorest countries with a gross domestic product (GDP) per capita (PPP) amounting to USD 1,967. Senegal has a population of over 12.6 million, of which about 58% live in rural areas and two-thirds of this rural population live in poverty. Dakar alone is home to about 25% of Senegal's population. Density in rural areas varies from about 77 inhabitants per km<sup>2</sup> in the west-central region to 2 per km<sup>2</sup> in the arid eastern section, which is an area with rampant poverty (65% of the national poverty rate). Only 33% of Senegalese are literate in a national language, and of the Senegalese population of 15 years of age and older, 39.3% can read, and among them only 29.2% are women. Merely 33% Senegalese currently have access to electricity and, in rural areas, only 10%. Even though the country's Human Development Index has been on the rise from 0.411 in 2010 to 0.470 in 2012, positioning the country at 154 out of 187 countries and territories. Although over 60% of the population is employed in the agricultural sector, only 15% of GDP is derived from agriculture.

The effects of CC on rural sectors are exacerbated because of limited knowledge and capacity for adaptation, and there is a need to build capacity in adopting drought-resilient agropastoral and agroforestry practices to counter the adverse effects of climate variability. Non-climate-driven problems such as unsuited agricultural management practices (regarding crop and variety selection, water and soil management, and rangeland management), increasing population pressures leading to expansion of agriculture into fragile ecosystems, and increasing competition between herders and agriculturalists, as well as lack of capital investment and positive incentives for sustainable rural development, are likely to be greatly aggravated by CC.

Periods of pronounced drought in recent years have led to declining farming sector outputs in Senegal. The country's farming systems are essentially rainfed, including 98% of farmlands. Rainfed agriculture depends heavily on climatic conditions, foremost the duration of the rainy season and the distribution and abundance of rains. Yields are directly exposed to climatic risks, with risk of drought being particularly high in the northern half of the country. Farmers in Senegal have low net revenues and small rainfed farms are highly vulnerable to climate change. Farmers adapt to climatic constraints in several ways: diversifying crops, selecting crops with a short growing cycle and weeding early in the north and late in the south. In Senegal, beyond the flood zones and the intra-dune basins, over 90 percent of agriculture depends on the amount of precipitation, which varies from year to year. The unreliability of rain has resulted in loss of soil fertility, poor harvests, food shortages, and impoverished populations, especially in rural areas. The poor conditions have led to out-migration of men in search for employment in urban areas. Women largely have been left to fend for themselves and their families, although they are now beginning to migrate too. Those remaining adopt intensive agriculture practices and expand land cultivation to combat the effects of climate change. Unfortunately, this type of agriculture has further diminished the productivity of the soil. Over 70 percent of women are active in the agriculture sector, yet they own only 13.4 percent of land.

Senegal's climate can generally be described as tropical. However, the weather does vary in different parts of the country, broadly comprising three main zones: (i) the coastal region—the Atlantic coastal strip is cooler than inland areas, partly due to brisk onshore winds; winter temperatures range from 18-26°C in January; in the summer maximum temperatures average at around 31°C; rains start in July, peak in August and tail off by October, with a total of 550 mm of rainfall annually; (ii) the Sahel region—the northern half of the country falls within the 'Sahel belt', a region of semi-arid land which spans across the African continent; here, temperatures can be cool at night (dropping to around 14°C), but often reach 40°C by day; rainfall is below 400 mm; (iii) the Southern region: the southern half of the country is hot and humid, with average maximum temperatures above 30°C throughout the year; rainfall is usually over 1,500 mm in the far south. Thus, average annual rainfall differs from north to south, ranging from 300 mm in the semi-desert in the north to 1200 mm in the south, with variations from one year to another.

The USGS 2012 factsheet visualizes Senegal rainfall reductions and temperature increases by combining the observed 1960–2009 changes with predicted 2010–2039 changes. Rainfall decreases range from -150 to -50 mm across much of the country; the western and eastern portions of the country remain substantially below the 1960–1989 average. The western areas of reduced rainfall coincide with the densely populated regions of Thies, Diourbel, and Kaolack. Observed changes (those occurring between 1960 and 2009) account for 63% of the change magnitudes. A second area of substantial rainfall declines lies in the southeast of the country, in the Tambacounda region. Smoothed time series of 1900–2009 rainfall, extracted for crop growing regions in Senegal, showed that rainfall recovered since the mid-1980s

<sup>7</sup> Part II should not be longer than 5 pages

but has not increased over the past decade, and 2000–2009 rainfall remains substantially (15%) below the 1920–1969 mean. These time series were based on crop growing regions in Thies, Diourbel, Matam, Fatick, and Kaolack, as well as southern Senegal (Tambacounda and Kolda).

Since 1975, temperatures have increased by almost 0.9°Celsius (°C) across much of Senegal. This transition to an even warmer climate could reduce crop harvests and pasture availability, amplifying the impact of droughts. Observed changes alone account for 63 % of the change magnitudes. Senegal is becoming substantially hotter. USGS (2012) time series of air temperature data show that the magnitude of recent (post-1975) warming is large and unprecedented within the past 110 years. Such warming, in regions with very high average air temperatures, can amplify the impact of water shortages. While the rainfall increases from the 1980s to 1990s helped improve yields, these yield increases have been offset by large declines in the amount of farmland per person. For the past 10 years, however, rainfall has remained steady, and it remains to be seen if the earlier rainfall increases will persist. The sea surface temperature gradient of the Atlantic Ocean swings slowly from north to south on a time scale of decades, and a reversal of the current state could lead to another precipitous Sahelian rainfall decline, a decline augmented by the effects of warmer air temperatures.

Senegal's NAPA reports that the agropastoral sector will be affected by CC, leading to increased land degradation, increase in poverty, and the breakdown of soils and overgrazing, in turn leading to the destruction of vegetation. According to the GEF-funded Land Degradation Assessment (LADA) project concluded in June 2011, implemented by UNEP and executed by FAO, land degradation is widespread and affects all production systems and is increasing at an alarming rate. According to the Senegal Country Environmental Analysis, almost two-thirds of arable land in the country is degraded—this has also been recognized by the Senegalese Government as a key barrier to development at local and national levels. This key challenge is reflected in the prioritization of activities tackling land degradation through water and soil conservation and restoration, including agroforestry development. Sustainable management of rangelands will become increasingly important with CC (Miehe, 2010). According to Mertz *et al.* (2009), the Senegalese have always been facing climatic variability at intra- and inter-annual time scales as well as at decadal time scales. Households are aware of climate variability; for example, considering the livestock sector in Senegal, farmers are concerned about poor animal health, fodder shortages and cost, and theft.

Changes in land use and livelihood strategies in Senegal could be driven by adaptation to a range of factors, and the implications for policy-making for agricultural and economic development are key to providing flexible options covering all aspects, in addition to specific solutions to adapt to uncertain climate. Adaptation of the agricultural sector is therefore not an end in itself but a means to address the development objectives of Senegal. A mix of technical solutions (such as more diverse sets of crop varieties to minimize risks, different planting patterns and a better integration between the crop, livestock and tree elements of smallholders' production systems), as well as institutional solutions, are necessary to support the rural communities, in an integrated way.

It is recognized that Senegal's agricultural and pastoral sectors are likely to be affected by CC with regard to both food crop and forage crop yields. Despite the fact that climatic variability has been considered in rural development policies, programs and field activities, farmers and agropastoralists are now subject to increased risks and will have to adapt their agricultural and pastoral systems to a hotter and likely drier future and react to the risk of decreasing yields and degradation of the natural resource bases (soils, biodiversity).

Main barriers related to CC identified within this context are: a) insufficient information and awareness of CCA methodology, best practice and strategy among institutions, producers and consumers; b) lack of attention to traditional knowledge and local practices related to coping with CC; c) the need to build capacity in adopting drought-resilient agropastoral and agroforestry practices to counter the adverse effects of climate variability; d) weakness of policies and programmes aimed at confronting CC in key sectors such as agriculture, pastoral and food security and promoting multi-sectoral policies and programmes; e) the need for technology and methods to tackle the impact of climate change on crops and animal breeding as relevant to food security; f) the need to strengthen institutional capacity and disseminate information and knowledge on CCA lessons learned.

## **2) Baseline scenario and any associated baseline projects**

In Senegal, the extension services are in a large part carried out by national development enterprises that support the Government on farmer technical awareness and support. This is the case for SAED (*Senegal River Valley National Development Agency*), working on rice and vegetable production in irrigated system, SODEFITEX (*Société de Développement et des Fibres Textiles du Sénégal*) working on cotton production, and ANCAR (*Agence Nationale de Conseil Agricole et Rural*), specifically working on advisory and counseling service for farmers, with the support of the Government to ensure extension agents for rural communities. These entities have now developed their own program on capacity building of farmers through FFS: for example SAED recently received funding of USD 161.535 to train around 2,000 producers of tomatoes, onions and sweet potatoes. In the cotton growing area, SODEFITEX has trained nearly 60 agricultural advisors and plans to roll-out the FFS approach in all cotton production areas. Moreover, the Government has introduced the FFS approach in the program called "Sustainable Agriculture", which includes several national institutions and NGOs, for which it provides organic fertilizers and biopesticides to reduce environmental risks from the use of agrochemicals. It is also important to note that other national programs work in perfect synergy with the IPM (Integrated Pest Management)/FFS to increase the impact for beneficiaries. The *Projet d'appui à la petite irrigation locale* (PAPIL) (Support to local small-scale irrigation) is an AfDB/IsDB project aimed at improving the free surface flood system,



establishing small hydro-agricultural improvement schemes and securing pastoral and agricultural production. In particular, the project builds water retention basins in the valleys to recover degraded soils and collaborates with FFS. Another important collaborating baseline project in the context of FFS is the GCP /RAF/453/SPA project "*Amélioration de la Production de riz en Afrique de l'Ouest en Réponse à la Flambée des Prix des denrées Alimentaires*", managed by FAO, which works in tight synergy with the USAID *Programme de Croissance Economique* (Economic Growth Program) by collaborating on rice production and post-harvest management, sharing research structures, advisory support to farmers, and resources. The USAID program aims to encourage investment in the agricultural sector, contributing to capacity building in agricultural value chains, including improved farming techniques and post-harvest management, introduction of modern management supply chains and logistics, increased storage capacity and processing, innovation in lending and capital raising, training programs and higher education, enabling conditions and exchange capabilities, and supports reform of targeted policies and regulations. The FFS is also used by the Millennium Village project, a regional multi-donor effort with a holistic, community-led approach to sustainable development that collaborates on the reinforcement of local development in the region of Louga.

This broad spectrum of ongoing activities illustrates the high level of integration of FFS in relevant initiatives recently concluded or still ongoing in Senegal, thus providing a solid basis for utilizing the FFS network to increase CC resilience through the proposed LDCF project. Indeed, FFS activities in Senegal are supported by the following FAO projects, all aimed at integrated long-term development and poverty reduction in rural areas:

- (i) the multi-focal GEF program "*Reducing dependence on POPs and other agro-chemicals in the Senegal and Niger River Basins through integrated production, pest and pollution management*" (FSP) (USD 4.1 million) (2009–2013);
- (ii) *Initiative to boost rice production in Sub-Saharan Africa* GCP/RAF/453/SPA; and
- (iii) *Strengthening food security in Niayes and Casamance* GCP/SEN/032/CAN (USD 5.4 million).

The projects are located in the most productive agricultural areas of the country, along the Senegalese river valley, in Casamance and in the groundnut basin. Notwithstanding, none of these projects integrates CC concerns into community-based capacity building. Improved use of climate information and appropriate modification of the crop and herders' cycle, using best-suited varieties and sustainable fodder management, taking into consideration ongoing climatic variations and modified seasonal variability, would be a driver of improved production and food security, in turn leading to poverty reduction.

A key role is played by the *Centre de Suivi Ecologique* (CSE) that is responsible for climate studies and CCA and was the first national implementing entity accredited under the Adaptation Fund for approving, monitoring, and managing projects in Senegal and regional neighborhoods. The CSE climatic database and the crop production monitoring and evaluation system form a very valuable information and methodology baseline. This relevant knowhow makes CSE an important executing partner for the implementation of the project. CSE has relevant experience in climate and CC, including:

- (i) the project *Quantifying weather and climate impacts on health in developing countries* (QWeCI), which aims to study human and animal CC-driven diseases as a follow up of the project *Analyses Multidisciplinaires de la Mousson Africaine* (AMMA);
- (ii) the project *Impacts du changement climatique sur l'émergence des vecteurs de la fièvre de la vallée du Rift au Sénégal : adaptation et stratégie pour une meilleure gestion du pastoralisme au Sahel* (AdaptFVR), which uses tele-epidemiology to produce dynamic mapping of livestock risks and exposure;
- (iii) the *Plateforme participative d'information pour l'adaptation des communautés vulnérables aux changements climatiques* (InfoClim) supported by the Centre de Recherche pour le Développement International (CRDI) and the Department for International Development (DFID-UK) under the umbrella program *Adaptation aux Changements Climatiques en Afrique* (ACCA), which ended in 2010. The project, in collaboration with UNECA, the Sahara and Sahel Observatory, AGRHYMET (a regional center of the Comité permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel, CILSS), and the International Union for Conservation of Nature (IUCN), successfully monitored and evaluated CCA indicators to reinforce resilience of vulnerable populations. Detailed agroclimatic analyses were produced studying the long-term trends of rainfall and temperature, and well as the cropping cycles. Capacity building of grassroots organizations with an operational approach to incorporating field aspects related to CC has already been tested and can easily be adapted and scaled up to an integrated, landscape scale level.

The National Agency of Civil Aviation and Meteorology (ANACIM), through its Department of Climate and Application, plays an important role at the national level, particularly in government policy in the areas of early warning for food security and meteorological assistance for farmers. With the drought of the 1970s and 1980s and the drop in performance observed in agriculture, national authorities and donors have drawn more attention to ANACIM for many projects: (i) to demonstrate to farmers the importance of taking into account technical advice on the weather in the planning and execution of the agricultural calendar; (ii) to develop effective tools to prevent food crises due to weather information for the Sahel countries—it is the logical continuation of project *Early warning and agricultural production forecast* (AP3A); (iii) to demonstrate the impact of the application of seasonal forecasting of rainfall in planning strategies and implementing the agricultural calendar; and (iv) to bring promising innovations in climate risk management

to bear on the challenge of protecting and enhancing food security and rural livelihoods in the face of a variable and changing climate.

Senegal has played an active role in the implementation of the Great Green Wall, which is aimed at halting desertification by improving the surrounding, now degraded soils, allowing resumption of crop cultivation and raising livestock by planting trees to stop the relentless advance of the Sahara desert. Senegal, largely with the aid of the World Bank, is also pro-active in the field of ecotourism.

National policies and strategies for agricultural development and food security have been accompanied by development partners through the financing of many projects on rural development, infrastructure, environment, transportation, nutrition, social protection, energy and water, the development of public and private sectors, and disaster management. The accumulated budget will contribute to develop synergetic field action.

Baseline initiatives are fragmented and lack a systematic approach to CCA. There are no integrated plans for pastoralist and farmer interaction improvements; the FFS approach needs to include CCA practices, grassland management, pastoralism, dry cereal cultivation, and crop/livestock/tree integration; community-based pastoral practices need to be strengthened; and best practices and lessons learned related to sustainable use of local species need to be systematized and scaled-up to be adopted by farmers and pastoralists. Insufficient information and awareness on CC adaptation methodology, poor capacity in adopting drought-resilient agropastoral practices to cope with CC, as well as a lack of technology and a recognized weakness by government authorities in mainstreaming CCA policies and programmes into the agriculture and agropastoral sectors, still impede adoption of practices and strategies to cope with climate change impacts.

The proposed LCDF project contributes to filling the above-mentioned gaps and reducing CC-induced threats by introducing CCA dimensions into the FFS/APFS approach. Supported by and integrated with the co-financing initiatives presented in Chapter 4 (see table 1), the LCDF intervention is envisioned to boost the above-mentioned baseline projects by: (i) adopting sound CCA management tools and practices, (ii) providing inputs and supporting farmers' activities towards CCA-related options, (iii) improving FFS/APFS curricula through CC-related considerations, (iv) supporting information and awareness-raising regarding integrated strategies for CCA, linking the agricultural and pastoral sectors into the framework of a sustainable land management approach, (v) improving crops and beef production value chains through new, CC-adapted cereal varieties and sustainable management of forage resources and, (vi) increasing institutional capacity to support coordinated policies, strategies and programs to shift from a reactive response towards a pro-active preparedness approach to climate events.

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

The LCDF project proposes to reduce the gaps and barriers through FFS and APFS as a powerful approach to integrating capacity development and implementation under one coherent methodology.

The main gaps identified in Chapter 1 are related to the fragmented information and a lack of systematic and long-term approach to CCA.

With the additional financing from the LCDF, the proposed intervention will expand the scope of the activities carried out in the country related to increased resilience of the agricultural and pastoral sectors to climatic changes and contribute to reducing the vulnerability of smallholder farmers and herders.

Through Component 1 the project aims to improve knowledge and information management and pilot CCA experiences to serve as baseline to inform Components 2 and 3. Component 2 is focused on capacity building and up-scaling of CCA strategies, technologies and best practices for small-scale farmers and agropastoralists through FFS/APFS, based on the knowledge and information systematized in Component 1. Furthermore, Component 2 will improve crops and beef production value chains, thus enhancing income generation, by introducing specific CCA curricula in FFS/APFS and capacity building of national program managers, farmers and agropastoralists.

Mainstreaming CCA strategies in agricultural and animal production development frameworks at country level is the objective of Component 3, which will improve the regulatory frameworks for achieving results and outputs of Component 2, drawing on information and knowledge systematized and disseminated in Component 1.

#### **Component 1. Developing/fine-tuning CCA strategies and tools based on improved knowledge and information management and piloting improved CCA practices in agricultural and pastoral production systems**

Component 1 includes a number of activities aiming to increase the knowledge and understanding of the interdependence between agropastoral and agricultural production systems and of CC-induced threats in targeted vulnerable areas. Such increase of knowledge will be an added value to the CSE-MA-ME assessment policy, which lacks a comprehensive strategy outlook and access to more systematic information. Furthermore, it will allow the development of a common and shared understanding of threats, opportunities and constraints, and will enhance key strategic elements. A tool for information management related to monitoring of vegetative stages and water availability, carrying capacity of dry rangelands and flood plains and herd displacement tracking will be developed as additional GoS activities and will thus improve the monitoring capacity for selected programs. Such knowledge activities will be a key factor for developing

agroecosystem-specific strategies, tools, and practices for increasing resilience on the basis of the co-financed program results, by adding key elements for CCA (see table 1).

The selection of best practices, their fine-tuning, and the piloting of improved practices at field level will include the optimal use of dryland crop genetic resources and rangeland species. In detail, participatory rangeland management plans, local “chartes pastorales”, and livestock feeding strategies will be formulated at an early implementation stage to be included in the FFS/APFS activities of the second component. The preparation of such collaborative tools will be based on fragmented but valuable information that could enhance social and economic outcomes for diverse stakeholders and will draw upon and synthesize existing information, making it available to multi-stakeholder platforms.

The creation and dissemination of vulnerability information will improve the knowledge level of different stakeholder groups involved in the design and implementation of adaptation measures. Improved knowledge and piloting practices and tools will be the baseline for developing CCA curricula and improving crops and beef production value chains through FFS/APFS network (outcomes of components 2). The participatory land management schemes will allow the best use of CCA technologies and approaches. Finally, good operational practices and “lessons learned” for enhanced adaptation to climate risk of the agricultural and pastoral sectors will be developed based on the ongoing and co-financed activities and mapping past and current farmers’ CCA practices and institutional support initiatives. The project will also play an important role in catalyzing and assisting Senegal in transferring lessons learned from other GEF-funded projects in Senegal, as well as from neighboring countries such as Mauritania, Gambia, Guinea and Mali, and also disseminating experiences by ANACIM on climate change.

The generation and dissemination of knowledge on climate-related vulnerability and risks will heighten political awareness and will increase political prioritization of CCA, which in turn facilitates CCA mainstreaming (Component 3). In addition, the increase in knowledge among policy-makers serves to improve the quality and specificity of mainstreaming efforts.

#### Component 2. Capacity building and up-scaling of CCA strategies, technologies and best practices for small farmers and agropastoralists through a growing network of FFS/APFS

This component will use the FFS approach as a tool for scaling-up farmers’ adoption of climate-resilient practices and adaptation technologies, including resilient varieties and diversification strategies to spread risks and increase system resilience. The community-led facilitation of practices and technologies will strengthen adoption processes and will be additional to baseline approaches that do not include cross-sector collaboration among local resource users or deploy effective methodologies to make farmers adopt climate-resilient technologies. Furthermore, the component will promote climate impact monitoring, weather forecast decision support tools, and assessment of climate means and extremes in the past and under climate change and their impact on agriculture, building on tools developed by CSE by appropriate adaptation of these tools and testing them in selected participating FFS and at a provincial/national scale.

FAO is supporting the Government of Senegal through several projects that aim at reinforcing farmers’ capacities and providing the required capacity building, including the participative education FFS approach. At the core of the FFS approach lies a participatory process involving groups of farmers actively engaged in testing and experimenting with adaptive solutions to changing environments and markets, with a view towards sustainable intensification and land restoration. The FFS are “grass-roots labs” in which farmers build and expand their knowledge bases, evaluate technical options and in the process become better equipped to adapt to changing conditions. FFS have been implemented in Senegal since the early 2000s. Strengthening the capacity of producers through good agricultural practices has improved crop yields of vegetables, rice and cotton and also reduced dependence on synthetic chemical pesticides. Nearly 20,000 farmers have been trained in 800 FFS in the agro-ecological zones considered vulnerable in the NAPA.

Evaluative evidence (e.g. recent SCCF evaluation by the GEF Evaluation Office) very strongly points to the fact that systems that lend reiterative support for the implementation of continuously evolving CCA practices are one of the most powerful approaches to building long-term adaptive capacity. For decades to come, dealing with uncertainty and an ever-changing information base will perhaps be the single biggest challenge for CCA activities. Structures facilitating continuous adaptive actions based on the respective newest information such as FFS, with its integration of CC with simultaneous implementation and continuous improvement (in short: the “grassroots lab”), are among very few existing and well-established systems that can provide this added value, giving FAO a unique advantage.

The present component will build on the existing and improved (i.e. CC resilient) FFS/APFS network to diversify farmers’ and herders’ activities and render them suitable to counter CC threats. This will include the improvement of crops and beef production value chains through a landscape approach and key cash crops to increase household revenue and capital accrual. The landscape approach for land-use planning will be incremental in relation with the baseline activities implemented by allowing local-level integrated production diversification and intensification and promotion of sustainable interventions, which so far have been based on a sector approach without a landscape planning outlook and without access to systematic information on ecological processes as an important priority-setting and decision-making tool. Furthermore, CC resilience initiatives supported by ANACIM and CSE will be replicated: the Infoclim approach, which focuses on climatic variability aspects, understanding of agroclimatic parameters and the variability of seasons by farmers, will be introduced in FFS structures, and farmers/herders will be made aware of the potential benefits of using agroclimatic information. The diversification of activities will include new adapted cereal varieties (millet, maize, rice) introduced in ecological areas to increase food security given the varying climatic conditions. For herders and pastoral

livelihoods, the increased quality of forage and its resilience to CC will be achieved by using selected improved species and varieties.

Implementation of adaptation measures will provide valuable feedback for knowledge creation and dissemination processes (Component 1). Especially in CCA learning by doing and lessons learned represent an important part of knowledge creation.

### **Component 3. Mainstreaming CCA strategies in a coordinated manner in agricultural and animal production development frameworks at country level and in selected vulnerable areas**

Component 3 will support the mainstreaming of CCA in agricultural sector development in selected rural areas, through knowledge and information systematized in Component 1. This will be additional to the baseline activities carried out by various GoS projects. The CCA cross-sectoral interventions will be coordinated in the implementation of FFS-based outreach strategies for CCA, for the CCA policy process monitoring, and towards the formulation of new CCA initiatives in the agricultural sector, including an inter-institutional task force that will coordinate adaptation interventions defining CCA agendas that are integrated into sector-level programming. CC-related agricultural policy approaches will be mainstreamed into the rural development sector practices based on a gap and opportunities analysis, driven by high-level awareness-raising activities, and will be additional to the current situation where resilience in most cases is dealt with as a separate issue or not dealt with at all. This mainstreaming process will be based on the findings from the application on the ground of CC-resilient practices supported by the FFS approach. Demonstrated adaptation measures and best practices through the second project component catalyze behavioral change among policy decision-makers towards active consideration of climate change implications in the development of policy and regulatory frameworks.

Finally, a "local CC resilience fund" to support CC adaptation activities will be designed also to improve farmers'/herders' access to innovative and improved technologies and reinforce long-term sustainability of interventions.

### **4) Additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF/SCCF and co-financing**

The proposed LDGF project has the scope to address the main gaps and barriers mentioned in the first chapter regarding the fragmented information and scanty data and best practices related to CC adaptation, weak capacity in adopting drought-resilient agropastoral practices to cope with CC-induced threats, lack of tools and technologies addressing CCA strategies and a weak institutional capacity to support policies and programmes to shift from a reactive response towards a pro-active preparedness approach to climate events.

Identified baseline projects address production in irrigated system, capacity building of farmers through the FFS approach, sustainable agriculture for reducing environmental risks, capacity building in agricultural value chains and monitoring CC.

Despite substantial baseline actions, activities have no systematic approach to CCA, thus gaps and barriers remain and continue to aggravate the situation: there are no comprehensive plans for pastoralist and farmer interaction improvements; the FFS approach needs to be further extended and differentiated to include grassland, pastoralism, dry cereals, and crop/livestock/tree integration; community-based rangeland management needs to be further boosted and expanded; the concept of "agricultural productivity" needs to be expanded to also include range and grassland sustainable management schemes; and the experiences of local species use need to be systematized and scaled up for adoption by farmers and pastoralists. The promotion of smallholder access to markets presents bottlenecks along the value chain that need to be further focused and rural activities need to be diversified. Pastoral smallholder food security still needs to be improved and implementation of existing laws is still needed. Finally, although there are improvements due to the existing interventions and governmental programs, an integrated institutional/programmatic strategy still needs to be further enhanced at a decentralized/local scale. The proposed LDCF intervention is needed to fully address the need for a more integrated approach to CCA, which takes into account the complex interactions between agricultural and pastoral production in, and with particular emphasis on, key productive landscapes such as the sections of the flood plains shared by agriculturalists, agropastoralists and herders. The LDCF intervention is required to boost the adoption of sound CCA management tools and practices, expand the scope of the FFS/Agropastoral Field School (APFS) approach, increase capacity building, and support coordinated policies and programs to shift from a reactive response towards a pro-active preparedness approach to climate events.

With the additional financing from LDCF, the proposed LDCF intervention will expand the scope of the activities carried out in the country related to increase resilience of the agricultural sector to climate change and contribute to decrease in the vulnerability of small-scale farmers and pastoralists who depend on agriculture.

The project marks a shift from earlier NAPA follow-up initiatives by implementing an up-scaling/mainstreaming strategy based on a recognized, cost-efficient and expanding training and extension approach building on the FFS/APFS concepts. While capitalizing on the results of the early NAPA implementation initiatives, the proposed LDCF project will work by establishing partnerships with ongoing initiatives for incorporating the FFS-CCA approach into existing national program frameworks of MA, ME, ANACIM CSE, thus contributing to filling the gap in the required increased adaptive capacity of the agricultural sector for food security. The adaptation scenario will allow for both the expansion of the FFS approach and the integration of CCA considerations and practices in FFS curricula. Furthermore, the adaptation scenario will lead to a more coherent intervention that will make the most of CSE expertise regarding collection, treatment, analysis, and

dissemination of data and information, with a view towards improving management of natural resources including food production systems, while at the same time piloting good operational practices and “lessons learned” for enhanced adaptation to climate risks of the agricultural and pastoral sectors in support of sound CCA policy-making and programming.

Funds are made available to meet the additional costs of the required interventions to support the urgent and immediate adaptation needs of the agricultural sector identified in the Senegalese NAPA. This will be achieved by enhancing the ability of small farmers and pastoralists to cope with increasing climate variability and increasing the resilience to CC of key agricultural and agro-pastoral systems in selected sites. Additional cost will ensure that farmers and agropastoralists are fully involved in the consultative process at all levels – community, district and national. By focusing on sustainable crop production and use of locally available resources (including careful management of agricultural biodiversity and grasslands) in at least three vulnerable/strategic ecosystems, the project will incorporate the decisive elements needed for both effectiveness and up-scaling potential.

**Table 1 - Co-financing projects**

The project will receive **co-financing** from different sources, as outlined below. This information will be updated during PPG for crafting final co-financing arrangements.

Project name and area of intervention	Donor Budget (M USD) timing	Baseline project description	Co-financing and additional value
<b>Strengthening Food Security in Niayes and Casamance</b> GCP/SEN/032/CAN	Canada executed by FAO  5.4M  2010-2012	<b>Objective:</b> Reinforcing food security by augmenting the agricultural production and improving farmers' revenues, with a focus on rice and horticulture  <b>Baseline:</b> The project is based on FFS and focuses on rice and horticulture production improvement through access to improved seeds, fertilizing schemes, and integrated pest management, as well as improved market knowledge. The project does not include climate-resilient activities.	<b>Co-financing:</b> 0.5M to Component 2  <b>Additionality:</b> The project will be supporting the present LDCF Component 2 activities with USD 0.5 million grant co-funds to provide inputs and supporting farmers' activities and CCA-related options and to improve FFS curricula and application of improved seeds, fertilizing schemes, and integrated pest management in a framework of climate variability. At the same time, the present LDCF project will be additional to the FAO project as it will support it in the integration of CC-related considerations.
<b>Initiative to Boost Rice Production in Sub-Saharan Africa</b> GCP/RAF/453/SPA <b>Area:</b> Saint Louis, Kaolack, Fatick, Kolda	Spain executed by FAO  5.8M  2012-2013	<b>Objective:</b> Increase domestic production of rice in five ECOWAS member countries  <b>Baseline:</b> The project has multiple actions including improved seed legislation and market, sustainable intensification of rice crops through FFS, and supporting farmers' organizations.	<b>Co-financing:</b> 0.5M to Component 2  <b>Additionality:</b> The present project will be co-financing the present LDCF FFS Component 2 activities by providing USD 0.5 million grant co-funds to provide inputs and supporting farmers' labour activities in implementing CCA-related activities to improve FFS curricula and their application. In addition, the FAO project will benefit from the additional activities of the present LDCF as it will integrate CC-related considerations into its own FFS activities.
<b>Projet d'appui au développement rural en Casamance (PADERCA)</b> <i>(Support to rural development in Casamance)</i>	AfDB executed by MA  35.5  2009-2016	<b>Objective:</b> The project contributes to poverty reduction and revitalization of rural activities in Casamance by increasing agricultural production on a sustainable basis.  <b>Baseline:</b> The project's activities of conservation and development of water, soil and forest resources are currently based on participatory planning, building of the capacities of farmers' organizations, improving the professionalization, and supporting social infrastructure. The project contributes to reversing the process of	<b>Co-financing:</b> 2M to Components 1-2-3-4  <b>Additionality:</b> All these activities are very much in line with the activities of the present LDCF proposal. Nonetheless, the PADERCA project does not focus on pastoral areas and neither does it include CC considerations; the present LDCF can therefore be considered to have additional value that can justify collaboration in the field. Both these kinds of consideration will be introduced in PADERCA activities through collaboration with the present LDCF. The project will provide co-financing to Components 1 and 4 of the present LDCF by supporting the information and awareness-raising at local level regarding integrated

Project name and area of intervention	Donor Budget (M USD) timing	Baseline project description	Co-financing and additional value
		degradation of natural soils by disseminating simple productive land restoration and environmental protection techniques, and involving communities in these activities and in their impact assessment. The PADERCA project aims at the recovery of degraded soils by: the rehabilitation or construction of salt control dykes and internal development of protected areas, the promotion of private nurseries and peripheral plantations, the restoration and maintenance of soil fertility through the adoption of water and soil conservation techniques, and development of fruit tree cultivation, as well as other activities.	strategies for CCA, linking the agricultural and pastoral sectors in the framework of sustainable land management approaches. In addition, the present LDCF will receive co-funds to Components 2 and 3 by introducing CCA options, taking into consideration that CC is accelerating soil degradation and is decreasing food security of affected areas.
<b>Projet d'appui a la petite irrigation locale (PAPIL)</b> <i>(Support to local small-scale irrigation)</i>  <b>Area: Fatick, Kédougou, Kolda and Tambacounda</b>	AfDB 13 IsDB 14.5 Executed by ME 2003-2015	<b>Objective:</b> Evaluate the free surface flood system realizing small hydro-agricultural improvement schemes and securing pastoral and agricultural production.  <b>Baseline:</b> The project is a long-term activity of AfDB that was later co-financed by IsDB to promote small-scale irrigation at the local level through rural communities and producer groups' direct operations. Activities are based on participatory planning for the development of small structures and facilities to control runoff (micro-dams, weirs, deepening of ponds and shallow ponds, micro-slopes, etc.), as well as on the regeneration of degraded lands and the improvement of living conditions of people in the rural communities concerned. The project forms an important baseline and its lessons learned are well developed, while collaboration with FAO is ongoing and PAPIL actions have already included FFS.	<b>Co-financing:</b> 7,853M to Components 1-2-3-4-5  <b>Additionality:</b> The present LDCF proposal will be additional to the PAPIL project by adding CC considerations into its activities of sustainable land rehabilitation and irrigation schemes. The PAPIL project will provide a loan co-fund to Components 2 and 3 by enhancing climate change resilience of irrigation schemes into agricultural lands through FFS. In addition, the project will provide co-funds to Components 1 and 4 of the present LDCF by land management plans, therefore improving the use of best practices in shared agricultural/pastoral areas in the framework of sustainable land management approaches. Those land management plans will increase CC resilience and food security of the involved population. As well, the present LDCF will make the most of PAPIL lessons learned through the awareness-raising activities.
<b>Programme for support to agricultural commodity chains</b> <i>(Programme d'Appui aux Filières Agricole, PAFA)</i>  <b>Area : (Groundnut basin) Diourbel, Kaloack, Fatick</b>	IFAD 26.2 Executed by MA 2012-2016	<b>Objective:</b> Durable farmers' revenue and livelihood improvement through their insertion in diversified and profitable value chains.  <b>Baseline:</b> The project supports small developing profitable economic activities, based on contractual arrangements with market operators, under the promising sectors that enhance the local agro-ecological potential, and enhances consultation between chain actors to identify and implement actions to address the constraints identified within these sectors and facilitate market access. Main actions will involve sesame and	<b>Co-financing:</b> 5M to Components 1-2-3-4-5  <b>Additionality:</b> The LDCF will be additional to the PAFA by inserting climate-resilient actions and consideration into project activities. The project will co-finance the present LDCF in all components as follows:  - Component 3 will be co-financed by the PAFA Component 1 working towards agricultural diversification and market access at the local level and by Component 2, which includes the development and structuring of value chains at the regional level  - Components 1, 4, and 5 will be co-financed by PAFA Component 3, which aims at increasing policy dialogue, knowledge management, and

Project name and area of intervention	Donor Budget (M USD) timing	Baseline project description	Co-financing and additional value
		horticulture production improvement, and infrastructure structuring. The project does not include CC consideration.	coordination at national level. - Component 2 will be co-financed by different activities towards the introduction of the FFS approach in various communities
<b>Structuring developments and implementation of irrigation schemes in the River Senegal Valley (Dagana and Podor)</b> <i>Aménagements structurants et réalisations de périmètres irrigués dans la Vallée du Fleuve Sénégal (Dagana et Podor)</i>  <b>Area : River Senegal valley</b>	USA Millennium Challenge Compact 173 Executed by Primature Government of Senegal 2010-ongoing	<b>Objective:</b> Evaluate water resources to allow competitive agro-industrial production and to sustain durable growth and poverty reduction  <b>Baseline:</b> The project is framed into a bigger national effort to introduce the Senegal River to paddy rice cropping and to boost irrigated production, and to continue the program of rehabilitation of irrigation schemes as well as the expansion of irrigation schemes. Although the project does not focus on CC, irrigation as such is making farmers more resilient towards climate variability. Nonetheless there is a need to train and make farmers aware of options to maintain sustainability and avoid mismanagement of improved lands.	<b>Co-financing:</b> 5M to Components 1-2-3-4  <b>Additionality:</b> The LDCF will be additional to the present activity, which does not take into consideration future rainfall variability when establishing and rehabilitating irrigation schemes and does not include capacity building in its activities; it will include the introduction of adapted rice and varieties and certified seeds, and reduction of pesticide use. The project will co-finance the present LDCF in all components.

#### 5) Global benefits (GEFTF, NPTF) and adaptation benefits (LDCF/SCCF);

**Adaptation benefits:** The intervention measures that this project will provide include: (i) increased knowledge and understanding of the inter-dependence between agropastoral and agricultural production systems and of CC-induced threats as well as development, fine-tuning, and piloting agroecosystem-specific strategies for increasing resilience, including optimal use of dryland crop-genetic resources and rangeland species; (ii) provision of tools and training for 12,500 farmers and 12,500 agropastoralists to improve their capacity to adapt to CC through: (a) a network of 1,250 FFS and APFS adopting improved CCA strategies and practices, (b) links to a growing network of institutional partnerships with at least one basic organization in each ecological area (25,000 farmers and pastoralists) assisted by potential partner programs incorporating improved CCA strategies, practices and genetic material, (c) at least 4 major partner projects and/or governmental programs actively involved in up-scaling CCA practices including improved soil, crops and herd management practices; (iii) more resilient rural livelihoods through the incorporation of innovative technologies and a broader array of income opportunities including improved crops and beef production value chains through a landscape approach and the incorporation of innovative technologies; (iv) the implementation of a “local CC resilience fund” supporting farmers’ and herders’ CC adaptation activities, at least doubling initial investments; (v) introduction of new varieties of cereals (millet, maize, rice) in ecological areas to increase food security with at least 750 producers multiplying locally adapted seeds for distribution through the FFS/APFS network; (vi) support to research on new varieties to improve the bank of adapted seeds; and (vii) mainstreaming CC into agricultural policies and programs and increasing institutional capacity at national level to develop CCA policies, strategies and programs.

#### Socioeconomic benefits

The proposed project will improve socio-economic conditions of small-scale farmers and herders, rural families and subsistence economies in vulnerable and key productive areas by: (i) improving education and knowledge, allowing rural populations to adapt and expand their traditional knowledge base and practices to CC impacts; (ii) increasing food security and supporting agricultural livelihood resilience to CC through activity diversification; (iii) six base farmers’ and agropastoralists’ communities benefitting from improved conservation and marketing of agricultural produce with particular attention to the valorization of localized food systems and from improved beef production value chains through a landscape approach along a selected number of transhumance routes; (iv) reducing social tensions between agriculturalists, agropastoralists and herders, and other natural resource users through a better integration of the crops livestock and tree elements of productions systems; (v) empowering most vulnerable rural groups, including women, building their resilience to CC and climate variability. Gender issues are still apparent in Senegal, and according to the Global Gender Gap Index Senegal ranks at 101 out of 134. This affects the operation of civil society organizations as many have a gender bias towards men. Operating projects targeting disparities conduct work through inclusive, community-based efforts to ensure that both men and women are made aware of the activities and to encourage their



mutual participation. The proposed project will follow the GEF and FAO policy of ensuring gender equality since poor rural women are among the most affected by CC.

Enabling the rural population to know and apply good management practices will also help reduce land degradation and prevent competitive pressures on natural resources and risks of desertification (indirect global environmental benefits). Furthermore, the project will reduce their vulnerability and enhance their adaptive capacity to prevent climate-induced economic losses (direct adaptation benefit). An additional socio-economic analysis will be conducted during project preparation to explore linkages and identify win-win solutions for local socio-economic benefits and adaptation benefits.

#### **6) Innovativeness, sustainability and potential for scaling up.**

Building an environment that promotes innovation is the objective of the farmer field school approach. Non-formal educational methods promote a safe environment socially. Everyone is encouraged to participate and share ideas and gender is an explicit focus. Existing local knowledge is solicited, valued and tested along with newly introduced ideas. Discussion, debate, and experimentation are the core of the field schools. Conducting experiments in communal field school plots provide a zero-risk environment where farmers can test new ideas with no fear of loss.

Continuous innovation is ensured by the FFS approach as “grass-roots labs” in which farmers build and expand their knowledge bases and evaluate technical options, which is particularly suitable considering the need for evolving knowledge to understand CC impacts. With the additional financing from the LDCF, the proposed intervention will expand the scope of the activities carried out in the country related to increased resilience of the agricultural sector to climatic changes and contribute to decreasing the vulnerability of small-farmers and pastoralists who depend on agriculture and husbandry, through the FFS methodology which ensures a continuous process for updating the information base needed to cope with CC.

In general, previous experiences with the FFS projects in the subregion show that sustainability of the Field School approach requires investment and time. Adoption or “institutionalization” of these new educational approaches come only after sustained stakeholder involvement, at multiple levels, during which the benefits of the approach become clear, leading to increasing demand for activities.

The FFS system is well established in Senegal and provides a solid and durable structure for the project results to be sustained, replicated and mainstreamed beyond the project duration. Through capacity building activities addressed to farmers, program managers and facilitators, the use of new tools and systematized information able to cope with CC-induced threats, as well as by including specific CCA curricula in rural development using the FFS/APFS approach, long-term capacities will be built and the sustainability ensured. The demonstration of the feasibility and effectiveness of adaptation measures is envisaged to trigger replication and scaling-up as well as create awareness and ownership in affected communities facilitating the long-term employment of diversified, strengthened livelihood strategies.

To achieve a significant demonstration effect of FFS within the community and thus stimulate demand for more information, high-quality training is important. It is reasonable to assume that training quality will be higher if a more concentrated and longer-term program strategy than is envisioned in this project is applied. Major benefits for sustainability will be attained by clustering the FFS/APFS approach, leading to the reduction of externalities and improvement of the general state of the ecosystems services. An agglomeration of FFS farmers may facilitate the formation of local markets and value chains, and may lower the costs of introducing other institutional and technical innovations. Hence, concentrating development efforts like FFS in well-defined target areas could be an effective tool of poverty reduction through sustainable rural development.

Experience with FFS projects in the subregion shows that with time and attention to building partnerships at national, district and local levels, scaling-up to significant numbers is possible. At the community level, practices that lead to clear benefits to farmers and which are cost-effective tend to spread from farmer to farmer. In many of the countries in the subregion where field schools have been active, statistics show a more than 90% reduction in use of toxic pesticides by training only a fraction of the total farming households. Diffusion (farmer-to-farmer) helps in scaling up numbers. To enable this diffusion, the project will build networks of trained trainers and farmers and link with all interested stakeholders (broadly speaking develop social capital within communities and between communities and district level service providers).

Further scaling-up of successful practices needs the creation of a national set of conditions integrating adaptation-relevant objectives within long-term development visions, poverty reduction strategies or their equivalent, and sector and sub-national strategies and plans. This requires alignment with governance mechanisms shaping the targeted policy process, using existing development planning processes rather than creating new ones. It is crucial to make sure there is effective communication between the lead ministry dealing with climate change adaptation (i.e. Ministry of Environment) and central ministries such as those for finance and planning. This will be accomplished through an intersectoral task force (see Component 3). The resulting output of the targeted policy process, which is part of the third component of the proposal, will include strategic and sector-specific goals and targets, supported by implementation strategies relevant to adaptation.



The project will build capacity and develop tools for improved climate-resilience in light of experience with practices tested and proven in agricultural ecosystems in the subregion, including Niger. Local management of seed systems for climate resilient varieties by farmers as well as their involvement in the experimental test and adaptation of technologies and practices in farming systems will strengthen local capacity for technology adoption and facilitate reliability and replicability.

On another level, creating strong awareness and support for climate change adaptation and disaster risk reduction in the agricultural sector policies, programs and institutions in Senegal will ensure that the process of adaptation to risks of climate change will be sustainable beyond the project. Supporting the development of an investment plan in support of adaptation to climate change will assure that budgetary provisions are allocated to support a sustainable CCA process.

In addition, the project will lead to the strengthening of structures and agreements for interagency coordination to address multiple risks and strengthen the capacity for cross-sectoral decision-making for the development of climate resilience.

Lastly, FAO will also ensure wide dissemination and sharing of lessons learned from the project among other programs, projects and countries facing similar challenges.

## **A.2 Stakeholders. Identify key stakeholders (including civil society organizations, indigenous people, gender groups, and other as relevant) and describe how they will be engaged in project preparation.**

The Ministère de l'Agriculture (MA) and the Ministère de l'Environnement (ME) in collaboration with the CSE and ANACIM will be the main partners for project execution. This LDCF project will be enlisted in the general framework of Senegal NAPA priorities, and will support the mandate of the CSE to manage funds on CC.

The integration of the project within the frameworks/mandates of the action plan and priorities of NAPA and CSE will allow for effective liaison with MA/ME-associated institutions. For instance, the National Department of Agriculture, the Senegalese Institute for Agricultural Research (ISRA) will contribute to the project activities by providing ameliorated or local ameliorated varieties and will work through the project on the reinforcement of seeds selection and multiplication; the Directorate of Plant Protection will continue to collaborate on FFS through the IPM process; as well the National Directorate for Waters and Forests of ME will support SLM practices, which will enhance the project ecosystem approach. Finally, the National Agency of Meteorology will provide downscaled data to reinforce pastoralists' decision-making at community level.

NGOs are part of what is commonly referred to as civil society. In Senegal, they are the most visible segment of civil society and include a wide variety of groups and organizations (feminist, cultural, religious and trade-related). Senegalese NGOs do not have members or sympathizers that participate regularly in financing their activities. Instead, they depend on external public or private partners as well as the Senegalese state for financial aid. There are many NGOs in Senegal, but they are particularly numerous in the North (the St. Louis Region) and the South (the Ziguinchor Region). These NGOs are active in many areas and they focus mostly on providing technical and institutional support at the grassroots level. They have established partnerships with producer organizations and the Government's extension services to provide agricultural extension and advisory services and support to farmers (World Bank, 1999).

There are hundreds of local organizations in Senegal. Many of these farmers' organizations are linked to the associative movement and adhere to the federation of NGOs in Senegal (FONGS). Once empowered through farmers' organizations and Community-Based Organizations (CBO), these farmers seek services from both private and public-sector providers and, over time, develop the ability to pay for such services. Farmers that are grouped into strong producer organizations have a significant advantage over the majority of Senegal's farming community. For instance, in the case of rice farmers in the SAED irrigation scheme, the proof that they are receiving extension assistance as well as subsidized inputs facilitates their access to credit (AgCLIR, 2009). Below is a list of some farmers' associations and groups in Senegal

- National Union of Fresh Produce Growers of Senegal (UNPM)
- Walo Farmers' Association (ASESCAW)
- Bamba-Thialen group
- Kabiline Group

Special emphasis will be placed on developing partnerships with the relevant public/private regional development agencies or "channels" – support agencies, farmers' organizations and women's groups, some of which are already involved in FFS. During the preparation phase of the project document, relevant CSO/NGOs will be identified and their specific roles will be defined for their direct involvement during the implementation phases.

A consultative workshop which will include civil society organizations, indigenous people, gender groups, and other as relevant stakeholders will be organized at the beginning of the PPG phase to jointly develop a Stakeholder Participation Plan. The Plan, which will be annexed to the project document, will define the specific tasks, intervention areas and the steps of the project execution in which each identified stakeholder will be involved.

Specifically, CSO/NGOs support during project implementation will be focused on two main steps: a) at the beginning of the project for an initial recognition of existing best practices and lessons learned in CCA and to select the most

successful; b) during capacity building of the farmers through FFS/APFS by supporting the training to improve CCA and by strengthening the liaison of farmer groups with extension services.

**A.3 Risks.** Indicate risks, including climate change risks, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the project design (Table format acceptable).

<b>Risks</b>	<b>Rating (High, Substantial, Moderate, Low)</b>	<b>Mitigation measures</b>
Probability of increased occurrence of more severe droughts, especially in the South, which may affect crop and livestock cycles and increase food/nutritional insecurity	M	The risk will be addressed through the implementation of policies and programmes to reinforce pro-active and coordinated responses and developing plans for rangelands management and by fostering community capacities to anticipate CC related threats. In addition, the project will prioritize the selection of drought-resilient crops to cope with climate change.
Farmers / herders conflict	M	Reinforcing protocols on Chartes and management arrangements, ensuring that the rights of each stakeholder are preserved and duties defined, will be the mitigation measure to cope with this risk.
Reluctance to endorse and participate in the project activities from communities and stakeholders.	L	An approach strictly based on local farmers / herder's participation, specifically through FFS and APFS, and which takes into strong consideration socio-cultural aspects of local communities, reduces risks. In addition, demonstrative events such as achievements on the ground that bring benefits to local producers and show loose reduction from adaptation activities, will contribute to mitigating the risk and overcoming skepticism. Best practices and lessons learned demonstrated to farmers, at the first stage of the project, by the involved CSO will strongly facilitate to overcome the risk
Seed shortages due to extreme weather events, prolonged droughts, or pests and diseases outbreaks with risk of crop/grassland failure.	M	The project will address by systematically linking the adoption of CCA measures and fostering of community-level field observation capacity to reduce seed multiplication failures, particularly with specialized seed multiplying farmers.
Limited capacity and reluctance/slowness by local and national institutions to actively participate	L	By mobilizing and articulating the capacity of different actors, projects and programs to work intensively with Government and gradually transfer skills to government institutions, and through capacity building of national program managers and awareness-raising activities addressed to policy-makers, the risk will be strongly reduced. The involved CSO will cover a crucial role by facilitating the mitigation measures through their consolidated networks.

**A.4 Coordination.** Outline the coordination with other relevant GEF financed and other initiatives.

The project draws on lessons learned, tools, and predictions from a number of FAO-led projects and initiatives in Senegal and neighboring countries: (i) firstly, it builds on the technical capacities and growing experience of FAO in the FFS approach within the project *Reducing dependence on POPs and other agro-chemicals in the Senegal and Niger River Basins through integrated production, pest and pollution management (FSP)* started in 2009, and the regional project

GCP /RAF/453/SPA “Amélioration de la production de riz en Afrique de l’Ouest en réponse à la flambée des prix des denrées alimentaires; (ii) secondly, it will integrate and adapt East African experiences, which have already applied the concept of Agropastoral Field Schools (APFS) with herders’ target groups. The project will also benefit from FAO’s broader experience in the application and mainstreaming of the FFS approach in agricultural/rural development frameworks in other Western and Eastern African countries where a strong FFS/APFS institutionalization process is underway.

The placement of the LDCF project both within the mandate of the CSE and in the framework of ongoing FAO-MA activities will facilitate the build-up of synergies and partnerships between the LDCF project and a broad range of “projets sous tutelle” of the CSE (in charge of the national implementation of CCA initiatives) and the ministries in charge of agriculture and agropastoral development and land management/restoration the Ecovillage GEF project.

For example the project will make the most of existing and past collaboration of FAO/CSE being a direct follow up to the CSE project *Plateforme pour l’adaptation des communautés vulnérables aux changements climatiques* (InfoClim) piloted in Thiès, which worked to familiarize local people with CC effects and to build adaptation skills, the Ecovillage project funded by GEF. It will also build on sustainable crop production intensification knowledge through the project *Projet d’appui au développement rural en Casamance* (PADERCA). Through the collaboration with the GEF TerrAfrica project *Strategic Investment Program for Sustainable Land Management*, it will develop further knowledge on sustainable land management practices and the improvement of ecosystem functions and services, while building on the project *Support to the strengthening of the National Early Warning System (EWS) for Food Security and Nutrition Monitoring in Senegal* to strengthen national and decentralized capacity.

The project will support and coordinate with the *Sustainable Land Management project* (GEF/WB) (2008 – 2013) and the *Great Green Wall Initiative* (GGWI) and the related GEF/WB program recently cleared by the GEF Secretariat. In particular, the proposed project will bring a specific contribution towards the achievement of Focal Area Objective CCA-3 “Promote transfer and adoption of adaptation technology”, according to FAO’s comparative advantage and the Ecovillage project, which involves 14,000 villages in Ecovillages, with implementation of plant nurseries, sustainable production and value chains for food security.

## DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:

### B.1 National strategies and plans or reports and assessments under the relevant conventions, if applicable, i.e. NAPAS, NAPs, NBSAPs, national communications, TNAs, NCSAs, NIPs, PRSPs, Biennial Update Reports, etc.

The project is fully consistent with the Senegalese NAPA presented in 2006. All NAPA adaptation measures are in synergy with the dispositions of post-Rio conventions ratified by Senegal: in June 1994 the “United Nations Framework Convention on Climate Change” (UNFCCC), and in July 2001 the “Protocol of Kyoto”. Following ratification a national committee called “Comité National de Suivi sur les Changements Climatiques” was implemented in 1994 in order to effectively apply all objectives indicated by the Convention. All adaptation measures were developed in order to be in synergy with the *Multilateral Environmental Agreements (MEAs)* that were also ratified by Senegal. Senegal also adheres to the framework of the *Strategic National Plan to Combat Climate Change* while prioritization of adaptation options are based on documents having a strategic link to the *Regional Integrated Development Plans*. It also joined others in ensuring that the African Ministerial Conference on Environment included climate change (CC) as one of the priority areas in the *New Partnerships for Africa’s Development (NEPAD)* and the project is in line with the National Agricultural Investment (NIPA) executed by the Comprehensive Africa Agriculture Development Programme (CAADP) under NEPAD. It also contributes to Domain #6 of the NEPAD Action Plan, dealing with the global environment and conservation of national resources.

The LDCF project will address the NAPA priorities that are strictly linked to the CC adaptation measures in agriculture sector, particularly: improvement of productivity and income generation, crop diversification, selection and use of drought-resilient varieties, institutional support to cope with CC issues.

Specifically, in the three agro-ecological zones of the proposed project the following priorities identified by NAPA will be addressed through the FFS/APFS approach:

Nord Bassin Arachidier: (i) the use of adapted varieties; (ii) improvement and restoration of soil fertility; (iii) retention ponds; (iv) development of small gardening units for vegetable production; (v) reduction of water erosion; (vi) reduction of soil salinity.

Zone sylvo pastorale: (i) improvement of water irrigation efficiency; (ii) drainage control to reduce soil salinity; (iii) reduction of wind and water erosion; (iv) the use of adapted millet and cowpea varieties; (v) grassland production; (vi) retention of ponds and pools; (vii) promotion of pastoral units; (viii) enrichment of pastures.

Zone du Senegal Oriental, vallée du fleuve Sénégal and Casamance: (i) reduction of bush fires; (ii) reduction of water erosion; (iii) rehabilitation of traditional cultures such as fonio, bambara groundnut and sesame; (iv) dissemination of techniques to forage harvesting; (v) intensification of techniques for fruit growing; (vi) reduction of soil salinity; (vii) the use of rice varieties tolerant to salinity and acidity; (viii) promotion of organo-mineral fertilization; (x) dissemination of agroforestry techniques; (xi) groundwater recharge; (xii) recovery of agroforestry techniques for saline soils.

However, the NAPA report (2006) highlighted that rainfall variability makes agricultural planning difficult and non-predictable, resulting in a further aggravation of food insecurity. The country needs to increase available information on climate change and to strengthen CC sectoral policies, dimension needs and strategies.

In the country strategy paper (2010–2015) produced by the African Development Bank (ADB), Senegal asserts its ambition to become an emerging economy in order to promote a world-class economic environment, develop infrastructure and achieve accelerated growth and it is recognized that pastoral activities are one of the stepping-stones needed for the future. It also mentions the steps that Senegal has taken in the face of the problems caused by CC. The Government of Senegal ratified the UNCCD in 1995, and submitted its *National Action Program to Combat Desertification* in 2000; the project supports activities carried out under this national strategy. The proposed project is also consistent with the approach advocated under the Terre Africa partnership, as it focuses on creating the enabling conditions for sustainable land management (SLM) scale-up.

There are many national strategies in the area of agriculture, nutrition and food security that are already taking place in Senegal: *Great Agricultural Offensive for Food and Abundance (GOANA)*; *Strategy for Growth and Poverty Reduction Strategy Papers (PRSPs)*; *Strengthening of Nutrition (PRN)*; *Program Drinking Water and Sanitation Millennium (MRE)*; *Local Development Program (PNDL)* as part of the overall Government of Senegal's goal to achieve poverty reduction and the MDGs. The project is also in line with the priority strategies made in the *PRSP II (2010)* where combating land degradation and promoting sustainable agriculture and forestry are defined as priority objectives to reduce poverty, and those contained in the *Accelerated Growth Strategy (CAS)*. This PRSP II vision is translated and transmitted through the country's *Sectoral Policy Charter (Lettre de Politique Sectorielle)* concerning the management of natural resources and the environment, and the Medium-term Sectoral Expenditure Framework (*Cadre de Dépense Sectoriel à Moyen Terme*, 2010–2012). The central role of natural resources in agricultural development and food security is acknowledged in the *Agricultural Development Policy Letter* while sustainable land use and environmental protection are priority actions indicated by the Government in its *National Action Plan for the Environment* and in the *Water Resource Master Plan of the Senegal River*. In 2000 Senegal adopted the *Environment Code* that led to the formation of the National Climate Change Committee (COMNACC) in 2003, the *Environment and Living Surroundings Action Plan* in 2005 and the *National Climate Change Adaptation Strategy* in 2010. The project will contribute to the mobilization of resources for the implementation of activities on adaptation to CC into national policies and strategies for food security with reference to the *Agro-Sylvo-Pastoral Orientation Law (LOASP)*, 2004, with the key elements of promotion of both improved land exploitation and soil fertility. The *Medium-term Sectoral Expenditure Framework (CDS-MT)* adopted in 2005 also defined a set of programs that should culminate in the achievement of the sectoral objectives fixed by the *Letter of Sector Policy for the Environment and Natural Resources* for the period 2009–2015 (*LPSE 2009–2015*) by implementing various lines of action that are consistent with the project: (i) the fight against desertification; (ii) the fight against global warming; and (iii) protection of cross-border areas.

Otherwise, the legal and operational frameworks governing alternative income generating opportunities for rural dwellers are evolving as a guiding law on renewable energies and biofuel that is being drafted to allow people to sell their excess solar power to the national electricity provider under certain conditions. As well, a *Letter on Tourism* has been developed in 2003 to develop a legal framework to sustainable tourism according to UNWTO framework and to reinforce rational natural resource use and environmental protection while the 2008 *National report on sustainable development (NRSD)* identifies potential and constraints of the sector, including ecotourism.

## **B.2 GEF focal area and/or fund(s) strategies, eligibility criteria and priorities**

The project will directly contribute to the implementation of the SCCF/LDCF adaptation strategy through the integration of climate resilience into agricultural and pastoral production for food security in vulnerable rural areas of Senegal through the Farmer Field School (FFS) approach. The proposed project will support the objectives CCA-1, CCA-2 and CCA-3. It will also contribute indirectly to land degradation by strengthening the sustainable land management (SLM) technologies and approaches by fully incorporating CC considerations into SLM menus.

Senegal's National Adaptation Programme of Action (NAPA) was submitted to the United Nations Framework Convention on Climate Change (UNFCCC) in July 2006. Consistent with guidance for the LDCF (GEF/C.28/18, 12 May 2006), the present proposal is a NAPA follow-up project aiming to address adaptation priorities of the agriculture and agropastoral sectors. The project will implement an integrated strategy of adaptation-focused interventions with emphasis on the enhancement of rural smallholders' and pastoral communities' food security. The project will thereby contribute towards the attainment of the Millennium Development Goals (MDG) (i.e. eradication of extreme poverty and hunger).

## **B.3 The GEF Agency's comparative advantage for implementing the project**

The proposed project makes use of FAO's comparative advantage in the area of capacity building, providing technical analysis and assessments in relevant areas such as sustainable crop production and land management, policy support and protection of biodiversity. FAO has considerable technical experience and many field projects in a number of areas covered under this project (agriculture production and food security, CC, agro-biodiversity, capacity building, development of community-based capabilities and rural development, forage production and grassland management). The proposed project also supports the up-scaling of the FFS approach that has been endorsed at national level by various governments in the region and that will be used for all capacity-building activities. FAO's Department of Agriculture and Consumer Protection is launching a review of 20 years of FFS experience, which will lead to the elaboration of a FFS-efficiency Monitoring System and facilitate access to additional funding for FFS-based activities under a result-based

framework. FAO currently has a significant project portfolio in Senegal with a major focus on food security and post-emergency operations, which supports the aims of CAS and the CAADP to develop strategies for food security while mitigating the effects of the current drought-driven food crises.


**PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)**

**A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):** (Please attach the Operational Focal Points endorsement letter(s) with this template. For SGP, use this OFP endorsement letter).

NAME	POSITION	MINISTRY	DATE (MM/DD/YYYY)
Mariline Diara	La Directrice	MINISTERE DE L'ENVIRONNEMENT ET DU DEVELOPPEMENT DURABLE	15-02-2013

**B. GEF AGENCY(IES) CERTIFICATION**

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

Agency Coordinator, Agency name	Signature	Date (MM/DD/Y YYY)	Project Contact Person	Telephon e	Email Address
Gustavo Merino Director Investment Centre Division Technical Cooperation Department FAO Viale delle Terme di Caracalla (00153) Rome, Italy		September 17, 2013	William Settle, Project Manager, Plant Production and Protection Division, FAO, Rome	+39.06.570 56039	William.Settle@fao. org
Barbara Cooney FAO GEF Coordinator Email: <a href="mailto:Barbara.Cooney@fao.org">Barbara.Cooney@fao.org</a> Tel: +3906 5705 5478					