



PROJECT IDENTIFICATION FORM (PIF)
PROJECT TYPE: Full-sized Project
TYPE OF TRUST FUND: LDCF

PART I: PROJECT IDENTIFICATION

Project Title:	Strengthening the resilience of women producer group's and vulnerable communities in Mali		
Country(ies):	Mali	GEF Project ID:	5192
GEF Agency(ies):	UNDP	GEF Agency Project ID:	4919
Other Executing Partner(s):	AEDD	Submission Date:	Nov 23, 2012
GEF Focal Area (s):	Climate change	Project Duration (months):	60
Name of parent programme: For SFM/REDD+	n/a	Agency Fee (\$):	546,000

A. FOCAL AREA STRATEGY FRAMEWORK:

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Indicative grant amount (\$)	Indicative co-financing (\$)
CCA-1	<u>Outcome 1.3</u> Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted area	<u>Output 1.3.1</u> Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	LDCF	3,200,000	10,800,000
CCA-3	<u>Outcome 3.1</u> Successful demonstration, deployment, and transfer of relevant adaptation technology in targeted areas	<u>Output 3.1.1</u> Relevant adaptation technology transferred to targeted groups	LDCF	2,000,000	4,900,000
Sub-total				5,200,000	15,700,000
Project management cost				260,000	800,000
Total project cost				5,460,000	16,500,000

B. PROJECT FRAMEWORK

Project Objective: Enhance women producer group's adaptive capacities to secure livelihoods production from climate impacts and increase socio-economic resilience in Malian vulnerable communes (Kayes, Koulikoro and Sikasso).						
Project Component	Grant type	Expected Outcomes	Expected Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative co-financing (\$)
1. Ensuring access to water for the development of subsistence activities	INV	Sustainable climate resilient water management systems provided to vulnerable communities, including women farmers, which in turn ought to support the development of subsistence activities.	1.1. Dredging and protecting channels from erosion of major rivers & ponds to restore fish habitats threatened by climate change and ensure resilience of sources of protein for men, women and children in rural communities (USD\$ 800,000);	LDCF	2, 000,000	6,000,000
	TA		1.2. Small scaled irrigation schemes provided to smallholder farmers, including women farmers, in high climate risks zone (USD\$ 700,000);			
Investments on climate resilient farming practices and income diversification for household production, crop diversity and nutrition	INV	Innovative approach and sustainable climate resilient technologies, provided to women farmers and producers to enhance and secure the production of local livelihood systems from climate impacts	2.1. Climate resilient multipurpose farm combined with water and soils conservation, diffusion of drought-adapted crop, provision of agro-meteorological information and building of Local Strategic Grain Reserves adopted by most vulnerable women and farmer to improve and ensure the sustainability of livelihoods (USD \$1,500,000);		3, 200,000	9,700,000
	TA		2.2. Pastoral perimeters created or restored to support production and maintain resilience of livestock resources from climate impacts (USD \$600,000);			

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Total project costs					5, 460,000	16, 500,000

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	AEDD	In-Kind	500,000
GEF Agency	UNDP	Grant	2,000,000
GEF Agency	UNDP	Cash	500,000
Multilateral Agency	UNCDF	Grant	8,500,000
Bilateral Agency	USAID	Grant	5,000,000
Total Co-financing			16,500,000

PART II: PROJECT JUSTIFICATION

A. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:

A.1.1 THE GEF FOCAL AREA STRATEGIES:

This project is consistent with GEF’s Strategy on Adaptation to Climate Change for the Least Developed Countries Fund (LDCF). LDCF resources will be invested into the diversification and strengthening household’s livelihoods (63% of LDCF resources) through the promotion innovative gender-responsive adaptation measures (CCA-outcome 1.3). Investments are planned also to support the adoption and integration of relevant adaptation technologies to increase and secure local production from climate impacts (CCA-3.1 outcome). Through this project, extension services, women and producers associations will also benefit relevant climate information to support their decision (CCA- Outcome 2.2).

A.1.2 FOR PROJECTS FUNDED FROM LDCF/SCCF: THE LDCF/SCCF ELIGIBILITY CRITERIA AND PRIORITIES:

Country ownership: Mali ratified the Kyoto Protocol in 1999 after signing the United Nations Framework Convention on Climate Change (UNFCCC) in 1994. As required by the UN Framework Convention on Climate Change, Mali prepared the first National Communication in 2000 and completed the National Adaptation Plan of Action (NAPA) in 2007 where national priorities for adaptation were identified and classified according to the vulnerability to climate risks. The country already submitted to UNFCCC First and Second National Communications (INC in 2000 and SNC in 2009).

Compliance with programme and LDC Fund policies: The project complies with the needs identified by the country within the NAPA as articulated in several NAPA priorities. As such, the proposal is in compliance with the NAPA rules and procedures and represents the response of Government of Mali to urgent and immediate adaptation needs. The proposed project is consistent with the strategic objective of the LDCF fund to promote the LDCs’ “climate compatible” development options and support the achievement of the MDGs under conditions of climate change.

Financing: The project is designed to reflect the additional adaptation costs of priority actions identified in the NAPA and builds on several other projects and programmes. The co-funding for this project is also within the stated guidelines with more than \$ 10 m in prospective funding. These amounts will be clarified during the project preparation phase. It should be noted that the among likely co-financing is twice the amount required by the LDCF guidelines for the amount of LDCF resources being requested by the Government of Mali for this project.

Institutional Synergy and Coordination: The implementing partner is the **Agency for Environment and Sustainable Development** (Agence pour l'Environnement et le Développement Durable [AEDD]) created in 2011 as a public national institution under the supervision of the Ministry of Environment and Sanitation. AEDD will delegate specific project activities to appropriate ministries, including the Ministry of Environment and Desertification Control, the Ministry of Animal Resources and Livestock Industries, the Ministry of Agricultural Development, the Ministry of Water and Energy, the Ministry of Decentralization and the Food Security Commissariat. Sub national authorities, civil society (women and youth associations, NGOs, media, Community Based Organizations) and the private sector will be important stakeholders of the project and will be provided with adequate space during the preparatory phase and on activities implementation. Details of the institutional arrangements will be spelt out during the PPG phase and outlined in the project document.

Monitoring and Evaluation: The implementation of the project's activities will reflect GEF monitoring and evaluation standards and procedures as well as UNDP guidelines on monitoring and evaluation of projects on adaptation policy. Details for monitoring and evaluation will be articulated during the project development phase.

A.2. NATIONAL STRATEGIES AND PLANS OR REPORTS AND ASSESSMENTS UNDER RELEVANT CONVENTIONS:

Mali's priorities in terms of development and global strategies are outlined in the Strategic Framework for Growth and Poverty Reduction (SFGPR 2012-2017) which focuses on 4 strategic axis: (i) Promoting sustainable growth and job creation; (ii) Equitable access to social services; and (iii) the consolidation of governance and structural reforms. The proposed LDCF project will support economic growth of poor people in vulnerable communes by increasing the resilience of agro pastoral and fisheries production, diversifying woman incomes sources, while strengthening their capacities to respond to the increasing incidence of extreme weather events.

The proposed project will support the implementation of the "**Initiative 166 Communes**". In an effort to achieve the country's MDGs, the 166 Communes Initiative has been launched to combat food insecurity in the 166 municipalities (communes), identified as the most vulnerable to food crises. This initiative is executed as part of the National Food Security Programme ("*Programme National de Sécurité Alimentaire*" - PNSA) and stems from the Economic and Social Development Project ("*Projet pour le Développement Economique et Sociale*" – PDES) whose goal is to accelerate Mali's development. The regions in which the 166 communes are located are: Tombouctou, Kidal, Gao, Mopti and Kayes and a few communes located in the regions of Koulikoro and Ségou. Commonalities between these communes include a lack of sufficient infrastructure required to meet the MDGs, such as health and educational centers, as well as strong rural-urban migration, leaving primarily women behind without the necessary financial and material necessities to fend for themselves and their children. The total cost of the 166 Communes Initiative is USD 95M and focuses on 8 axis: (i) Agriculture and Hunger, (ii) Education , (iii) Gender, (iv) Health, (v) Energy, (vi) Water supply and Sanitation, (vii) road and transport and (viii) Environment. The proposed LDCF project will support this ongoing initiative by enabling Mali to enhance adaptive capacities of vulnerable groups in the context of resilience to expected climate change pressures.

Mali developed a national policy on climate change (PNCC) to help the country cope with the challenges of climate change and sustainable development. Five specific objectives of the PNCC have been defined for this purpose including: (i) To facilitate a better consideration of climate challenges in the sectoral policies and strategies of national socio-economic development and guide the actions of public, private and civil society for sustainable development in a changing climate; (ii) Increase the resilience of ecological systems, production and social systems to the effects of climate change through the integration of adaptation measures in priority sectors which are the most vulnerable; (iii) Contribute to the global effort to stabilize concentrations of greenhouse gas emissions in the atmosphere, particularly by promoting clean and sustainable projects; (iv) Promote national research and technology transfer for climate change; and (v) Strengthen national capacity on climate change. To achieve the objectives defined by the PNCC, a National Strategy on Climate Change (SNCC) has been associated. The proposed LDCF project will support implementation of PNCC objective 2 through the promotion of adaptation technologies on key livelihoods sectors: agriculture, livelihoods, forestry and fisheries.

With the support of UNDP, the country developed a strategic framework for a Green Economy and Resilience to Climate Change, together with a proposal of programmes for the mobilization of "fast start funding". This framework has two sectoral pillars; first Adaptation and Climate Resilience and second Green Economy: Mitigation and REDD + and two crosscutting pillars (Development and Transfer of technology and financial mechanism). LDCF is contributing on the implementation of this Green Economy strategy at local level.

The project will focus on key adaptation interventions that were identified in the NAPA process as being of high priority by stakeholders at national, departmental, communal and village levels. The proposed LDCF project is supporting the realization of 7 out of the 19 NAPA priorities:

- **NAPA Priority Projects #1&2: Adoption of improved food varieties adapted to climate change:** the objective is to improve the living conditions of communities facing to food insecurity associated with the adverse effects of climate change. The proposed LDCF project will provide improved seeds, livestock and fish varieties provided to 1500 farmers, herders and fishermen to increase their productivity under changing climatic conditions.
- **NAPA Priority Project #3: Promotion of income-generating activities and development of mutual assistance:** This NAPA project is contributing to fight against poverty through income sources diversification. In the proposed LDCF project, women groups will be engaged into resilient income generating activities (such as fisheries, market gardening, etc.) to diversify and increase households sources of income;
- **NAPA Priority Project #4: Five-year aquaculture programme in Mali (2008-2012):** The objective is to promote sustainable fish production and diversify the communities fishing activities. The proposed LDCF project will support rivers and ponds dredging and channels protection from erosion in selected communes to restore fish habitats threatened by the CC and increase fish production/communities protein resources;
- **NAPA Priority Project #5: Promoting cereal Banks in Mali:** The objective is to support vulnerable people to cope with the shortfall in production associated with climate risks through the creation of cereal banks. The proposed LDCF project will establish and equip village grain and seed storehouses and other technologies for preservation to supply food during critical periods.
- **NAPA Priority Project #6:** Use of meteorological information to improve agricultural production and contribute to food security in Mali. The objective is to provide advice to rural areas; meteorological advice and technical support to better plan and execute efficiently their agricultural activities to improve production. The propose LDCF project will provide agro-meteorological information to rural producers in order to minimize climate risk and secure or increase agricultural and livestock productions.
- **NAPA Priority Project #14:** Development CES / DRS actions for agriculture, forestry and pastoral purpose : the objective is to recover degraded lands and improve the socioeconomic status of vulnerable populations.

The proposed LDCF project will support stabilisation of soils in agro-pastoral landscapes using soil and water conservation measures (CES/DRS), including banquettes, planting trees and sowing seeds of drought-resilient fodder species.

B. PROJECT OVERVIEW:

The Government of Mali is currently tackling development constraints through the implementation of baseline activities which include various agricultural and rural development initiatives focusing primarily on stimulating rural economies, improving agricultural productivity and promoting sustainable land management. The proposed project builds on a number of baseline projects implemented by the Government in response to increasing concerns vis-à-vis food security in vulnerable communes and to integrate climate variability into development strategies.

B.1. DESCRIBE THE BASELINE PROJECT AND THE PROBLEM THAT IT SEEKS TO ADDRESS:

The proposed project will be built on baseline programmes supporting food and nutritional improvement in selected vulnerables communes.

A. *The UNCDF’s Programme on “Food and Nutritional Security in Nara (Kayes) and Nioro (Koulikoro)” (2012-2016, expected cofinancing USD\$ 8,500,000)* aims to maintain a sustainable improvement of food security of vulnerable groups, by promoting their access to inputs, technologies and markets and by strengthening the capacities of local actors to act against food insecurity in the local development. This project is part of a multi-partner programme of the Belgian Fund for Food Security. The Programme focused on:

- building technical and institutional capacities to manage food security: the baseline project will build capacity building of territorial collectivity, mainly municipalities to more effectively integrate the various dimensions of food security, knowledge, climate change and gender issues. In addition, municipalities will improve the access of internal resources to unlock the potential of local revenue collection and the development of programmes / agreements with municipal authorities for more effective and sustained mobilization.
- implementation and management of socio-economic, production and transformation infrastructures to improve food security. The baseline will establish a Food Security Fund (FSA- € 3 million) to establish structuring investment projects at the community level such as: services infrastructures for education, rehabilitation of water infrastructures, basics works to increase agriculture productivity, and investissements for the protection and exploitation of available water.

B. *the USAID-Feed the Future (2010-2015, expected cofinancing USD\$ 5,000,000)* aims to provide targeted assistance to increase average yields of irrigated and lowland rice—by 33 percent and 66 percent, respectively—as well as double sorghum yields and increase, by 50 percent, millet yields in targeted areas. Additionally, crops using new technologies will be expanded by 100,000 hectares. More than 255,000 children will be reached with services to improve their nutrition and prevent stunting and child mortality. Significant numbers of additional rural populations will achieve improved income and nutritional status from strategic policy engagement and institutional investments. Feed the Future in Mali will concentrate its interventions in 143 targeted communes in three of Mali’s eight regions—**Sikasso**, Mopti and Timbuktu—and the two communities in the Millennium Challenge Corporation intervention zones in the Alatona district of Segou region. To meet its objectives, Feed the Future Mali is making core investments in four key areas:

- Technological Advancement : Advances development of key agriculture sectors by adapting technologies to local conditions and disseminating these to Malian agricultural producers.
- Value Chain Development : Identifies major constraints to sector development (from farm to market) and means of addressing them in order to raise the efficiency of production and trade, thus raising rural incomes and reducing costs for consumers.
- Enabling Environment : Enables sector and value chain development by empowering selected public and private institutions to plan, develop, implement, and monitor agricultural and food security strategies and policies.
- Nutrition : Targeted nutrition interventions will be integrated into agricultural production and trade (value chain) components to ensure improved nutritional outcomes for Malian populations in geographic regions of emphasis, as well as social and behavior change communication for improved infant and young child feeding practices

Partnership with the proposed LDCF project is expected on values chain and technologies development.

C. The UNDP support Programme on Management of Environment and Sustainable Development (PAGEDD in French, 2010-2016, expected cofinancing USD\$ 2,000,000) offers synergies in institutionalization and capacity building in the field of environment and climate changes. The component 1 of PAGEDD is supporting the mainstreaming of climate changes into relevant policies and strategies; the component 2 is building partnership with national institutions (e.g. parliamentarian, economic and Social Council, etc.); the component 3 is improving national communication/advocacy on CC and the component 4 is mainstreaming gender issues. There are strong linkages in term of communication on CC. the proposed LDCF project will benefits main communication on climae changes products developed to enhance women producers capacities on climate changes.

B.2. Incremental/Additional cost reasoning: DESCRIBE THE INCREMENTAL (GEF TRUST FUND) AND THE ASSOCIATED Global environmental benefits TO BE DELIVERED BY THE PROJECT:

Climate changes and livelihood in vulnerable communes

Climate change will limiting factor for the development of the Initiative 166 communes (in particular results that it is seeking to achieve) is no longer going to be effective without considering climate change in local development strategies. Proposed project target communes' (Kayes, Koulikoro and Sikasso) are highly sensitive to changes in rainfall, where most households in these regions derive over 70 percent of their income from agriculture, livestock and forestry sectors, and are therefore the most vulnerable to climate change. Table in below show vulnerability of main livelihood activities.

Project intervention	Characteristics	Main livelihood activities	Current indicators of vulnerability to climate change
Region of Koulikoro	West and Central : 100-150 day rainy season, 700 mm/year	Rain fed millet/sorghum area; millet is the major crop, sorghum towards the south; also grown: maize, groundnuts, melons, sesame -bambara groundnuts, cow pease are important cash crops & chicken and guinea fowl also bring in cash from towns and neighbouring countries -small scale vegetable gardening; -cross-breeding of cattle	-Highly uneven precipitation level and diminishing; -High cereal production deficit.

Project intervention	Characteristics	Main livelihood activities	Current indicators of vulnerability to climate change
Region of Kayes	Western sub zone, rainfall 1000 mm/year	Millet, sorghum and fruits niche area for fruit production; small livestock; Fishing activities (Senegal River)	<ul style="list-style-type: none"> -Diminishing precipitation level; -Important loss of forest cover due to cotton production leading to acute land degradation and scarcity of fuel wood; -Important pressures on local pastures leading to significant reduction in livestock carrying capacity; -Suffering from adverse effects of sedimentation process; -Inadequacy of cultural calendar due to a changing climate; -Important rural exodus.
Region of Sikasso	Southern, 150-180 days rainy season, 1200-1400 mm/year	<p>Maize/cotton/fruit area</p> <ul style="list-style-type: none"> -Staple food in south: maize -staple food in north: millet and sorghum -Shea nuts, nere pods also collected and important for food sources -this region is the heart of cotton cultivation -fruit -some seasonal transhumance of local cattle into Ivory Coast 	<ul style="list-style-type: none"> -Highly uneven precipitation level and diminishing; -Highly vulnerable to drought leading to leading to important reduction in production level, food production deficit and loss in revenues; -Inadequacy of cultural calendar due to a changing climate; -Important loss of forest cover due to cotton production leading to acute land degradation and scarcity of fuel wood; -Important pressures on local pastures leading to land degradation and significant reduction in livestock carrying capacity; -Important rural exodus.

The evaluation report of agricultural campaign (2011-2012) showed that the agro-sylvo-pastoral campaign was characterized across the country by climate disturbances more or less pronounced according to the agricultural areas. The late and early rains did not allow a good evolution of cultures including those suitable for rainfed agriculture. The recent rains expected to allow crops to complete their cycle properly have been realized in few areas in the Sikasso region. In the region of Kayes, the prospects for flood recession crops of short-cycle maize and sorghum are poor due to the limited extension of flood areas. The possibility of crop season is compromised this year and might not be possible for 75% of the villages surveyed in Kayes. This would reduce the availability of food usually from the campaign and make more precarious food situation of the poorest households, which use crops season to supplement their income. The general conditions of livestock are also affected by rainfall deficits and level of flooding. Watering conditions are moderate overall. However, they are becoming increasingly difficult along some rangelands due to early drying of water points.

The consequences are severe for the poor households, specifically women, mainly because of their strong dependence on natural resources and their limited capacity to address climate change especially extreme climate events such as droughts. According to the NAPA, climate change caused significant losses in crop production with an estimated reduction in cotton yields by 150 tons in 2005 and probably up to 3.500 tons by 2025. Similarly, production of millet and sorghum decreased by 150 tons in 2005 and is likely to further diminish by

2.524 tons in 2025. According to the outcomes of various climate models, the climate trends for future scenarios – without improved planning and management, particularly improved water and natural resource management plans – will negatively impact communities’ livelihoods systems, namely agriculture, fisheries, livestock and forestry which directly impact households food security and poverty.

The poorest households especially suffer in the pre-harvest period of July-October due to a lack of cereal stock and cash from the previous harvest season. During this period, which also sees the highest rates of migration to urban areas, prices for local or imported rice increase by up to 17 per cent, while those for millet, sorghum or maize increase by 33-39 per cent (national figures). Many communities have been forced to abandon their traditional livelihoods while nomadic groups are becoming sedentary in order to take advantage of emergency relief programmes. As a result, agriculture and fisheries are being replaced by grazing on poor pastures, which grow only during the short rainy season, from July to September and are prone to overuse and degradation. Without adaptation action, this degradation is expected to continue.

The barriers to increasing the resilience of Malian communes to climate change are related to the biophysical environment, the availability of financial resources and limited capacity of local communities to implement identified climate-resilient activities/practices across landscapes commune/wide capacity. The absence of coherence in perceptions of change and what needs to be done to manage uncertainties is a recipe for undermining resilience to climate change and adaptive capacity and therefore national efforts on human development. As climate change manifests and increasingly impacts the communities’ livelihood resources, regional efforts on poverty reduction is likely to be undermined and hamper the achievement and certainly the sustainability of MDG targets.

Adaptation alternative

The Government of Mali emphasized in the NAPA and PNCC the importance of investing on adaptation to strengthen the climate resilience of most vulnerable groups (especially women and children) at the community level. The proposed LDCF project will focus enhancing women and producer group’s adaptive capacities to secure livelihoods production from climate impacts and increase socio-economic resilience in Malian vulnerable communes (Kayes, Koulikoro and Sikasso). The targeting of women is especially important because they are significantly involved in farming and are the main providers for the household. Women are not prominent in farmer associations and a majority lack the requisite technical skills to make the necessary adjustments – on farm, and thereby through a significant portion of the local economy – to address a changing climate. The project will be developed around the following components.

Component 1: Ensuring access to water for the development of subsistence activities

Outcome 1: *Sustainable climate resilient water management systems provided to vulnerable communities, including women farmers, which in turn ought to support the development of subsistence activities.*

Baseline: In **Sikasso**, one of the obstacles to agricultural productivity is water runoff and a resulting loss of soil nutrients that are vital for crop growth. A well-documented technological solution to this problem is ridge tillage, or the practice of creating earthen ridges along the contour lines of a sloping field to prevent water runoff. Under the baseline USAID Initiative “Feed the Future”, local partners will scale up ridge tillage to benefit many more farming households. The objective is to significantly expand the farmland currently under ridge tillage in Mali from approximately 17,000 hectares to about 100,000 hectares in the Sikasso and Mopti regions, which is expected to diversify and raise the incomes of about 10,000 farmers by 20 per cent.

In **Kayes and Koulikoro**, the new UNCDF Programme “Food and Nutritional Security” will support vulnerable producers in Nara and Nioro to improve their agricultural capacity through the development of lowlands irrigation schemes (300 ha), rehabilitation of 16 ha and construction of a storage dam. UNCDF will engage NGO (e.g. PROTOS Belgium) to develop a participatory management of water resources to reduce environmental risks and social conflicts in the intervention communities. Relevant experience and information on municipal client contractorship, water management and sanitation will be capitalized and distributed, and the communication between various actors water has improved.

Unfortunately, the trends in rainfall decrease and variability, and the increase in temperature will lead to a high evaporation-transpiration which could worsen water shortages in the selected region and their use in production systems. Most of small producers, particularly women farmers, still have limited access to irrigation systems that require high investment cost for purchasing the equipment, and high technological expertise for installation, operation and maintenance. While the UNCDF programme is supporting irrigation scheme, the scope of intervention is limited to two cercles out of 15. In addition, according to tradition, women are entitled to the less fertile land where access to water is the most critical factor.

LDCF alternative: The enhancement of water resources is a major priority as identified in the Initiative 166 communes and various environmental and agricultural policies such as the Rural Development Strategy (RDS), the Agricultural Orientation Law (LOA), the Programme of Action for Integrated Water Resources Management (PAGIRE), the Programme for Sustainable Land and Water Management (GDTE). The NAPA has identified a number of different options to promote water infiltration; storage and flow for increased water availability for improved productivity were weighed for cost-effectiveness and sustainability. Under **Component 1**, the LDCF project will support the promotion of sustainable climate resilient water management systems to improve water access to vulnerable communities, which in turn ought to support the development of subsistence activities.

Activities under this outcome include the dredging and protecting channels from erosion of major rivers & ponds (**Output 1.1**) to restore fish habitats threatened by the CC and increase fish production/communities protein resources. The selection of technology for clearing and cleaning the channels in securing regular flow of water is based on considering the utilization of the locally available labor either through the replication of the ‘cash-for-work’ approach in order to improve cash flow to communities, or limited equipment inputs. Where there is inaccessibility to heavy equipment or this could result in more environmental damage to surrounding biodiversity, the human labor through the ‘cash-for-work’ scheme will be employed. That would also enhance the skills of local experts and farmers in undertaking the design and construction of similar activities. That will also enhance the capacity to operate and maintain the system for sustainability and cost-effectiveness in contrast of requesting for expert services from abroad and outside the region.

Small-scaled irrigation schemes will be provided to small farmers in high climate risks zone (**Output 1.2**). Supplementary irrigation will be enabled by the development of small diversion structures off the main channels to improve crop production and rangeland productivity. These will be simple, farmer-friendly structures, using locally available materials. Such structures do not require sophisticated design and construction, and do not easily become silted, and can be operated and maintained through the empowered local government and strengthened water users groups. Following the decrease in rainfall and erratic nature of its distributions predicted for these regions of Mali, irrigation-based production is crucial to supplement the predominant rain-fed system that has increasingly become instable.

Finally, LDCF resources will cover the cost of local water management arrangements (**Output 1.3**) through strengthening roles and capacities of local water associations that will continue enforcing locally appropriate and tested adaptation measures in water access and management. Training will be organized on climate risks, the management and maintenance of waterways as well as in the methods of water conservation for sustainability and better management of the infrastructures. Providing investment funds through Water User Associations will encourage capacity at community level delivery systems, and support their ability to engage with and leverage government social development funds through their local government system.

Component 2: Investments on climate resilient farming practices and income diversification for household production, crop diversity and nutrition

Outcome 2: Innovative approach and sustainable climate resilient technologies provided to women farmers and producers in vulnerable communes to enhance and secure the production of local livelihood systems from climate impacts

Baseline: In **Sikasso**, Feed the Future is implementing activities to improve agricultural education provided by the University of Bamako/IPR (Institut Polytechnique Rural) and specialized agriculture technical schools will further expand the knowledge base of improved cultivation practices. To address inequalities and raise women's returns in the production and processing of millet and sorghum, Feed the Future is promoting measures to reduce the time intensity of farming and processing activities in which women are dominant. Additionally, Feed the Future Mali is exploring partnership possibilities with major players in several agro-industries that would also contribute resources, expertise, and opportunities to this programme. Feed the Future Mali is deepening and strengthening its partnership with the Observatoire du Marché Agricole (OMA) to improve market information systems for cereals and livestock, including the expansion of SMS (Short Message Service) updates provided via cellular telephone.

In **Kayes and Koulikoro**, the new UNCDF Programme will build capacity of producers' organisations including functional literacy; and support the access to income generating activities, the development of business strategies and operations in conjunction with warrantage cereal banks. In the livestock sector, UNCDF will support the establishment of suitable credit mechanisms, processing units (milk) and facilitate access to markets.

While the two baseline projects are improving income and nutritional status, climate changes will continue to be a limiting factor. The numerous effects of climate change and variability such as irregular rainfall pattern, high temperature, long dry period, flash floods and droughts have made agricultural production increasingly challenging. The socio-economic consequences of climate change impacts on the livestock sector include: (1) sharp increase in prices of livestock and meat following reduction in supply under high animal mortality caused by droughts; (2) shift in livelihood activities by a significant number of nomadic grazers to sedentary activities; (3) fall in incomes of animal grazing; (4) change in the composition of herds through gradual replacement of cattle with small ruminants and camels.

LDCF alternative: This component addresses the resilience in subsistence livelihoods of vulnerable communities achieved cost-effectively through the adoption of climate resilient technologies. Providing the communities with range of fisheries, agro pastoral practices and technologies e.g. drought- and disease-resistant varieties, integrated crop-livestock production systems etc. in taking advantage of increased water availability to boost productivity, is a cost-effective investment instead of introducing activities outside of their local knowledge-based. An innovative approach will be set up through integrated farming and livestock management systems. Given the importance of the traditional participation of women in natural resource management, activities will explicitly support a gender-sensitive approach.

Under GEF resources, climate resilient multipurpose farm combining (CR-MPF) using climate resilient crops, multi-purpose trees, vegetables and seasonal crop will be established with women farmers groups and other producers to improve and ensure the sustainability of farmers' livelihoods **Output 2.1**. The CR-MPF system is cost effectiveness based on low-external inputs and sustainable farming practices, which allow smallholders farmers, such women, to integrate different technical elements into the CR-MPF system and to produce crops for both, home consumption and cash income generation. This will ensure the sustainability of farmers' livelihoods, especially for women smallholders (with fields from 0.2 to 0.6 ha) who cannot otherwise produce enough food to support their families. The application of CR-MF require a supply chain approach combining:

- a. Realisation of soil and water conservation (SWC) activities through anti-erosion works, improved vegetation, biological treatment of river banks, etc. in order to improve runoff management and infiltration on both rangelands and arable areas and limit erosion of cultivated land. The implementation of adaptation actions such as conservation and restoration practices that involve agro-forestry activities to increase soil and forest resilience will be also privilege as cost-effective measures rather than purchasing inorganic fertilizer and purchasing concentrates as animal feed;
- b. Establishment of mechanisms for the sustainable diffusion of drought-adapted crop. One effect of climate change, including variability, on crop cultivation is that many areas where crops have been grown for centuries will no longer be suitable for dryland cultivation (because of reduced soil water content as a result of increased temperatures and evapotranspiration). The barriers to widespread use of these crop varieties include technical capacity and financial constraints. The seed or seedlings of such varieties are frequently unavailable to local farmers, specifically to women, because seed or seedlings are not effectively distributed. There are, however, varieties of millet, sorghum, maize and beans that are particularly drought-adapted and could be used for increasing resilience to climate change, including variability. The seedlings used for reforestation will be from indigenous species. This will capitalize on the local knowledge of the communities in nursing and managing the tree species adapted to the local conditions offering cost-effective solution in restoring the degraded land. This is a cost-effective approach rather than purchasing inorganic fertilizer and purchasing concentrates as animal feed or using exotic tree species even if they are fast-growing species;
- c. Provision of agro-meteorological information tailored to livelihood needs using innovative gender and age communication channels (community radio, SMS, etc.). This will help producers, specifically women groups, to take decisions in order to minimize climate risk and secure or increase agricultural livestock and fisheries productions. Expertise and experiences gained under the LDCF financed project will be scaled up. Farmers and extension agents within the targeted municipalities will be trained in data collecting methods and in the practical use of agro-meteorological information with the aim of demonstrating the advantages of using this information before taking decisions related to agricultural production.
- d. Building Local Strategic Grain Reserves (LSGR) at commune level to address climate-triggered food shortages. In anticipation that food will not always be available in the quantity needed, Local Strategic Grain Reserves as a way of buffering/offset-ting shortfalls in food supply or in order to stabilise prices with the goal of maintaining food security. A small and well-managed stock could provide "degrees of freedom" in responding to crises, allowing quick sales or emergency distribution as needed until commercial imports and food aid can arrive.

Under **Output 2.2**, pastoral perimeters will be created or restored to intensify production and preserve the livestock from climate impacts. The Pastoral perimeters seeks to improve plant resilience by giving plants time to restore reserves, and to increase seed emergence by increasing hoof impact to break up crusted soil surfaces. An expected outcome is greater plant cover and the emergence of perennial species.

The LDCF financed project will support dry-season gardening activities by women to improve food and income diversification in local communities (**output 2.3**). According to recent WFP report on hunger situation, women in villages and camps need support to strengthen their market gardening and reforestation but also for the valuation of traditional activities (winnowing, weaving, tanning, tapestry, sheep fattening) to produce mats, blankets and carpet wool sheep, making pillows and other items. Other activities will also cover establishment village shops to sell essential commodities and install windmills (or multifunctional platforms) to make ease their daily tasks. Other activities will be consider such as installation of food transformation units, development of warranting operations linked with Grain Reserves, etc. The GEF Small Grant Programme will support the selection of communities project's based on a profound analysis and understanding of each community's vulnerabilities and adaptation needs in excess of local capacities, one derived from preliminary Vulnerability and Capacity Assessments. Capacity on business development will be provided and project will enable them to access finance from existing micro-finance institutions to sustainably support their micro-enterprises. Diversification of local livelihood strategy is an adaptation action that will be undertaken in increasing the resilience of subsistence livelihoods cost-effectively. Not only does this reduce poverty through income-generation actively, it also increases food security and improves the nutritional level of households.

Finally, GEF resource will support the establishment of a collective action for women farmers (**Output 2.4**) to incorporate most effective livelihood management strategies' in different climate contexts and for different groups of women. Training of women farmers will be organised on the development of small and medium enterprises, which can provide diverse and sustainable sources of income to help cushion families through periods of scarcity. This will also help to increase productivity and access to markets whilst sharing knowledge, information and productive assets including land, livestock, and credit. Linkages will be developed with UNCDF Programme on Food and Nutrition, specifically component 1 aiming to increase capacity of small producers on management and micro-credit. The UNDP support Programme on Management of Environment and Sustainable Development Promotion (PAGEDD in French) will support women groups to share knowledge on climate changes. Under PAGEDD, climate changes information and awareness tools are already developed and applied.

B.3. DESCRIBE THE SOCIOECONOMIC BENEFITS TO BE DELIVERED BY THE PROJECT AT THE NATIONAL AND LOCAL LEVELS, INCLUDING CONSIDERATION OF GENDER DIMENSIONS, AND HOW THESE WILL SUPPORT THE ACHIEVEMENT OF GLOBAL ENVIRONMENT BENEFITS. AS A BACKGROUND INFORMATION, READ [Mainstreaming Gender at the GEF.](#):

Socio-economic benefits:

- a. Risk of crop failure reduced: In areas where SWC on farmlands and flood diversion for supplementary irrigation is introduced, the risk of crop failure is reduced, crop yield is expected to increase, and availability of animal feed is increased (crop residue and pasture land carrying capacity). The development and dissemination of drought-resistant and early-maturing seeds will similarly reduce the risk of crop failure. The dissemination of drought-resistant livestock and appropriate livestock management techniques will enhance the economic benefits of the off-farm SWC, and, together with the improved extension services, will result in improved rangeland management in the programme area, with associated economic and environmental benefits.

- b. Reversing degradation of natural resources such as land, waters, forests and biodiversity will improve the livelihood of the project’s most vulnerable people. Introduction of multipurpose trees including forage and wild fruit trees within catchments and woodlots will reinforce communities’ coping mechanism during times of drought to save their lives and their important assets like livestock.
- c. The increased water storage capacity and introduction of climate resilient production practices will support the agro pastoralist community to change expand the current hectares of land used from subsistent rain-fed production to irrigated vegetable production. Farmers will be able to produce at least twice a year. Households of agro-pastoralists using the rehabilitated water supply will increase their production by several folds.
- d. Expected additional benefits from pastoral perimeters are: improved plant cover, re-appearance of rare plant species, longer grazing periods; milk production, calving interval, health and stocking rate; better management of the transhumant herds; household income with the release of labor for other activities and increase of incomes from livestock
- e. A well-managed Local Strategic Grain Reserves (LSGR) could be a relevant instrument for adaptation to climate change. Extreme climate events like drought and floods have triggered the use of LSGR as a response and planning instrument for coping with food shortages.

Gender dimension

Given the importance of the traditional participation of women in natural resource management, activities will explicitly support a gender- sensitive approach through gender-specific measures. The specific needs of women producers will be considered at all stages of project design, from preliminary Vulnerability and Capacity Assessments to project implementation, and particularly when developing climate-resilient income-generating activities (that will be designed to meet their needs), sustainable mechanisms for transmission of climate and weather forecasts (that will be important to their decision-making imperatives and delivered using channels that are relevant to them) and also updating regional plans/programmes and projects. At the same time, recognition will be given to women’s comprehensive knowledge of and experience with respect to, for example, seed selection, medicinal plants, local hydrology, and community transformation, as well as coping strategies that can promote adaptation to climate change. Information about climate change and adaptation measures must therefore be designed and disseminated in gender-sensitive ways and be combined with explicit efforts to ensure that women and girls – especially those who are poor or have been denied the right to an education – can easily have access to and absorb the necessary information.

B.4. INDICATE RISKS, INCLUDING CLIMATE CHANGE RISKS THAT MIGHT PREVENT THE PROJECT OBJECTIVES FROM BEING ACHIEVED, AND IF POSSIBLE, PROPOSE MEASURES THAT ADDRESS THESE RISKS

Risks	Level	Mitigation measures
Impacts of insecurity in the North leading to a presence of massive refugees	Medium	<ul style="list-style-type: none"> ➤ Affected people are benefiting support from the relocation Programme established jointly by UN agencies in Mali in Partnership with local Authorities
Low mobilization of the target group caused by a poor understanding of climate change issues	Low	<ul style="list-style-type: none"> ➤ Increased collaboration with the target communes ➤ A participatory approach ➤ Sensitization to the effects of climate change

Risks	Level	Mitigation measures
Lack of sufficiently qualified partners	Low	<ul style="list-style-type: none"> ➤ Capacity-building ➤ Permanent Screening and evaluation of partners ➤ Collaboration with communes at a decentralized level

B.5. IDENTIFY KEY STAKEHOLDERS INVOLVED IN THE PROJECT INCLUDING THE PRIVATE SECTOR, CIVIL SOCIETY ORGANIZATIONS, LOCAL AND INDIGENOUS COMMUNITIES, AND THEIR RESPECTIVE ROLES, AS APPLICABLE:

The project is targeting about 2500 households living in 10 vulnerable communes. Potential beneficiaries will be the following:

- Rural producers will directly benefit from a number of initiatives that are aimed at improving their agro-sylvo-pastoral activities and livelihoods.
- Chronically poor and vulnerable households (estimated to be about 15,000);
- Private economic agents, whose activities are related to the rural sector (food processing, construction, etc.).
- Rural and semi-urban households and communities living in neighboring areas and indirectly benefitting from multiplier effects (market, food security, strengthened social services, etc.).
- The local and the national institutions through the initiatives aimed at building their technical and institutional capacities.

<u>Key stakeholders</u>	<u>Expected roles</u>
AEDD	Project Coordination
Ministry of Environment and Desertification Control, the Ministry of Animal Resources and Livestock Industries, the Ministry of Agricultural Development, the Ministry of Hydraulics and the Ministry of Decentralization	Administrative and technical support
Regional/Local Government: Governor and Councils	Expects to benefit directly from the project's capacity building activities
Civil society women and youth associations Community Based Organizations NGOs media	Individual and group capacity building in climate change Implementation of project activities Peer-to-peer knowledge exchange Support the creation and production of informative material about climate change and cattle raising (leaflets, guide books, videos, etc.)
Initiative 166 Communes Partners	Partnership for the execution of activities in the project sites.

B.6. OUTLINE THE COORDINATION WITH OTHER RELATED INITIATIVES: .

INITIATIVES	COORDINATION
Projets GEF PNUD et FAO - NAPA Agriculture	Lessons learned from the projects will be the basis for adoption of climate resilient practices. On-going GEF projects have already put in place mechanisms to supply drought tolerant seeds, climate information sharing. Experiences gained will be used. The AEDD in collaboration with the Ministry of Agriculture will develop a framework for sharing experiences. It should be noted that both UNDP and FAO LDCF projects have all held their kickoff workshops in October 2011 to identify concrete adaptation activities on the sites selected in consultation with the local communities and with the participation of stakeholders directly involved in the proposed AF financed programme. Thus, collaborative planning started in the conceptualization of this programme in building on the complementarities with on-going projects and programmes.
World Bank – GEF/Great Green Wall (Mali Component)	AEDD has circumscribing each project's intervention area to avoid duplication. In addition, exchanges information between the two projects is underway for better complementarity of actions on the ground.

C. DESCRIBE THE GEF AGENCY'S COMPARATIVE ADVANTAGE TO IMPLEMENT THIS PROJECT:

UNDP is one of the most active Agencies supporting the Malian government in the area of climate change. UNDP supported the development of the National Adaptation Programme of Actions (NAPA) and is supporting the Government to implementing with LDCF finance the first NAPA project in the agriculture sector. UNDP supported the country on the development of the strategic framework for a green economy and resilience to climate change, together with a proposal of programmes for the mobilization of "fast start funding". This framework has two sectoral pillars: first Adaptation and Climate Resilience and second Green Economy: Mitigation and REDD+ and two crosscutting pillars (Development and Transfer of Technology and Financial Mechanism).

With regard to the financial mechanism associated with the strategic framework, UNDP is supporting the establishment of two funding windows:

- The National Fund for the Environment called Green Fund Mali. Operationalization of this fund is planned for 2015, where it will be equipped with an efficient architecture in terms of project cycle management costs, and ownership and responsibility for mobilizing domestic resources through taxation. Studies have been conducted to take stock of identifying sources, amounts, tax instruments, the opportunity costs, impacts, and regulatory provisions, consultations and validations of all stakeholders: government private sector, communities, sector departments, NGOs and civil society.
- The Multi-Donor Trust Fund Mali: is intended to mobilize international resources available on the basis of financial flows currently climate and opportunities for future funding.

C.1. INDICATE THE CO-FINANCING AMOUNT THE GEF AGENCY IS BRINGING TO THE PROJECT:

UNDP will provide a co-financing of **2,500,000** through its actions implemented under PAGEDD (\$2,000,000) and also support to the PMU (US\$500,000).

C.2. HOW DOES THE PROJECT FIT INTO THE GEF AGENCY'S PROGRAMME (REFLECTED IN DOCUMENTS SUCH AS UNDAF, CAS, ETC.) AND STAFF CAPACITY IN THE COUNTRY TO FOLLOW UP PROJECT IMPLEMENTATION:

The proposal is aligned with the **UNDAF** and **UNDP Country Programme** (2006-2012) and fully fits into the fourth strategic priority which aims at "Increasing food security, rural development and job opportunities for vulnerable rural communities." It is consistent with all the outcomes listed under the fourth strategic priority and directly relates to those outcomes aimed at enhancing capacities to use climate information for improved monitoring, forecasting and mitigation of climate-related disasters and food crises.

The proposed project is built on current UNDP involvement on the *Initiative 166 Communes*. During the starting phase (2009-2011), UNDP supported the development of the reference situation of the *Initiative 166 Commune*, the establishment of the institutional framework and the mobilisation of donors. UNDP is part of the UN Joint Programme « Improving Child Nutrition and Food Security in the Most Vulnerable Municipalities in Mali » (2009-2013, financing USD\$ 8,000,000 from MDG Achievement Fund) developed an integrated approach to achieve four primary outcomes : (i) enhanced food security, (ii) improved nutritional status of women and children through appropriate prevention and treatment, (iii) the inclusion of nutrition and (iv) food security aspects in relevant national and community based frameworks and enhanced national capacities for appropriate assessment and monitoring, including improved responsiveness to changes in levels of nutrition and food insecurity in targeted communities. The project is implemented in Bandiagara and involves UNICEF, WFP, WHO, FAO and UNDP. Main achievements are : (i) First baseline survey on food security and nutrition in Bandiagara, and study on productivity diversification completed ; (ii) 200 women trained in horticulture practices; (iii) 77 health workers trained on prevention and treatment of malnutrition; and (iv) Planting of school gardens and construction of drinking water access points begun.

The proposed project will also build on the achievements and experience of the Territorial and Local Development (TC-LD) Project, a joint UNDP and UNCDF project. The aim of the TC-LD project was to build the capacity of communities including their institutions in the area of micro-projects and structuring investments. Thanks to the level of funding, 134 local government institutions out of the 159 in the two regions of Mopti and Timbuktu benefited in the improvement of their capacity to organize, plan and implement local government development programmes, mostly programmes to fight poverty, improve access to basic social services, and capacity building in sustainable natural resources management. The proposed LDCF Project will capitalize on the approach for the delivery of adaptation capacities to the communities.

The Proposed Project will benefit support from the on-going UNDP support Programme on Management of Environment and Sustainable Development Promotion (PAGEDD in French). With a budget of 6,200,000 USD for 5 years (2011-2016), PAGEDD objective's is to mainstream environment, specifically climate changes issues into national/local policies, programmes and project with a strong gender dimension.

The Mali Office has the necessary expertise to support projects; this includes its unit in charge of Environment who works regularly with national, local partners on programmes / projects, including the sustainable

management of natural resources, environmental protection, land degradation and Climate Change (adaptation and mitigation).

UNDP / Mali recruited a national specialist on climate change within the framework of UNDP Boots on the Ground Initiative, one of the Goal is to strengthen UNDP country offices in 26 Least Developed Countries by national policy advisors climate change. The staff under the Environment Unit is providing technical and policy support to following key areas: 1) assistance to the international climate negotiations; 2) capacity building to access and implement climate finance; and 3) effectively integrating climate change into a country's national plans, policies and strategies to ensure development is both low-emission and climate resilient.

Moreover, Country Office operations are supported by regional advisory capacity based in the UNDP Regional Centre in Pretoria. UNDP has dedicated Regional Technical Advisers focusing on supporting adaptation programming and implementation in a range of technical areas relevant to this project including disaster management, infrastructure development, ecosystem-based adaptation, capacity development, and local governance reform. Our network of global Senior Technical Advisors provide additional technical oversight and leadership helping to ensure that programmes on the ground achieve maximum policy impact.


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):

NAME	POSITION	MINISTRY	DATE
Alamir Sinan Toure	AEDD	Ministere de l'Environnement	19/10/2012

B. GEF AGENCY(IES) CERTIFICATION

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

Agency Coordinator, Agency name	Signature	Date	Project Contact Person	Telephone	Email Address
Yannick Glemarec Executive Coordinator UNDP/GEF		Nov 23, 2012	Mame Dagou Diop (G-LECRD)	+27 12 354 8115	mame.diop@undp.org