



REQUEST FOR CEO ENDORSEMENT

PROJECT TYPE: FULL-SIZED PROJECT

TYPE OF TRUST FUND: LDCF

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PART I: PROJECT INFORMATION

Project Title: Scaling up Community-Based Adaptation (CBA) in Niger			
Country:	Niger	GEF Project ID: ¹	4701
GEF Agency:	UNDP	GEF Agency Project ID:	4790
Other Executing Partner(s):	CNEDD	Submission Date:	February 18, 2014
GEF Focal Area (s):	Climate change	Project Duration (Months)	48
Name of Parent Program (if applicable):	n/a	Agency Fee (\$):	375,000

A. FOCAL AREA STRATEGY FRAMEWORK²

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Grant Amount (\$)	Co-financing (\$)
CCA-1	Outcome 1.3 Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	Output 1.3.1 Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	LDCF	396,000	3,900,000
CCA-2	Outcome 2.2 Strengthened adaptive capacity to reduce risks to climate-induced economic losses	Output 2.2.1 Adaptive capacity of national and regional centers and networks strengthened to rapidly respond to extreme weather events	LDCF	1,510,000	4,000,000
CCA-3	Outcome 3.1 Successful demonstration, deployment, and transfer of relevant adaptation technology in targeted areas	Output 3.1.1 Relevant adaptation technology transferred to targeted groups	LDCF	1,694,000	7,000,000
Subtotal				3,600,000	14,900,000
Project Management cost			LDCF	150,000	726,000
Total project costs				3,750,000	15,626,000

¹ Project ID number will be assigned by GEFSEC.

² Refer to the [Focal Area/LDCF/SCCF Results Framework](#) when completing Table A.

B. PROJECT FRAMEWORK

Project Objective: Strengthen the responsiveness and adaptive capacity of administrative/technical support services at the commune-level to enable generation of a critical mass of climate resilient communities and achieve more climate resilient economies in Maradi region, Republic of Niger						
Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Grant Amount (\$)	Confirmed Co-financing (\$)
Municipal authorities, technical services, and targeted communities are technically strengthened to promote climate resilient local development	TA	Effective climate risk information and management tools are supplied and adopted by municipal leaders, technical extension services and community organizations (CBOs and NGOs) of the 7 targeted municipalities of the Maradi Region	1.1. Members and technical workers of regional and municipal councils, extension services (agriculture, environment and water and livestock) and NGOs and CBOs active in the seven targeted municipalities have the tools for mainstreaming climate change into development plans (PLD, SRAT, PNAT) and into the management and planning of socio-economic activities	LDCAF	1,906,000	500,000
	Inv		1.2. A sustainable and effective communication system is established to provide municipal council members, extension services and community organizations (CBOs and NGOs) with relevant climate information and agro and hydro-meteorological advisories, and other climate risk management tools			
	TA		1.3. Municipal development plans and annual budgets for the 6 prioritized vulnerable municipalities will be reviewed and updated to integrate effective climate risk management to support more climate-smart investments			
	TA		1.4. CBA best practices (including gender differentiated data) are captured and widely shared/disseminated and cross-community learning on adaptation across the Maradi Region and Niger is promoted to support replication in other vulnerable communities			

Project Objective: Strengthen the responsiveness and adaptive capacity of administrative/technical support services at the commune-level to enable generation of a critical mass of climate resilient communities and achieve more climate resilient economies in Maradi region, Republic of Niger

Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Grant Amount (\$)	Confirmed Co-financing (\$)	
Scaling-up and implementation of measures to build rural communities' adaptive capacities	Inv	Locally-designed climate-resilient livelihoods options and measures are implemented and scaled-up in the 7 targeted municipalities of the Maradi Region	2.1. At least 3,300 heads of households - rural producers from the 7 prioritized municipalities, of which 80% will be women, are engaged in climate-resilient income-generating activities (CR-IGAs)	LD CF	1,694,000	14,400,000	
	Inv		2.2. Farmers possess skills in entrepreneurship and promising sectors management to strengthen the profitability and sustainability of resilience activities				
	Inv		2.3. An operational chain from production and storage to distribution of early maturing seed varieties resistant to drought for millet, sorghum, peanut, cowpeas, and tiger nuts is established				
	Inv		2.4. The distribution system for agricultural and livestock inputs is strengthened in the 7 intervention municipalities				
	Inv		2.5. Soil and Water Conservation/Soil Protection and Restoration techniques are diffused throughout the seven intervention municipalities				
	Inv		2.6. Develop 250 ha of farmland with small-scale irrigation systems and disseminate small scale irrigation and sustainable water management techniques to 1,500 rural farmers, of which 50 percent will be women, in the three targeted municipalities				
Subtotal					3,600,000	14,900,000	
Project management Cost (PMC) ³				LD CF	150,000	726,000	
Total project costs						3,750,000	15,626,000

³ PMC should be charged proportionately to focal areas based on focal area project grant amount in Table D below.

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

Please include letters confirming cofinancing for the project with this form

Sources of Co-financing	Name of Co-financier (source)	Type of Cofinancing	Cofinancing Amount (\$)
National Government	CNEDD/ Prime Minister Cabinet	In-kind	200,000
National Government	Prime Minister Cabinet	Grant	500,000
Other multilateral agency	Joint Maradi Program	Grant	13,000,000
Other multilateral agency	UNCDF	Grant	1,400,000
GEF Agency	UNDP	Grant	526,000
Total Co-financing			15,626,000

D. TRUST FUND RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY¹

GEF Agency	Type of Trust Fund	Focal Area	Country Name/ Global	(in \$)		
				Grant Amount (a)	Agency Fee (b) ²	Total c=a+b
UNDP	LDCF	Climate change	Niger	3,750,000	375,000	4,125,000
Total Grant Resources				3,750,000	375,000	4,125,000

¹ 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.

² Indicate fees related to this project.

F. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:

Component	Grant Amount (\$)	Co-financing (\$)	Project Total (\$)
International Consultants	84,000	12,500	96,500
National/Local Consultants	148,000	25,000	173,000

G. DOES THE PROJECT INCLUDE A “NON-GRANT” INSTRUMENT? No

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

PART II: PROJECT JUSTIFICATION

A. DESCRIBE ANY CHANGES IN ALIGNMENT WITH THE PROJECT DESIGN OF THE ORIGINAL PIF⁴

**A.1 National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e NAPs, NBSAPs, national communications, TNAs, NCSA, NIPs, PRSPs, NPFE, Biennial Update R
N/A**

A.2. GEF focal area and/or fund(s) strategies, eligibility criteria and priorities. N/A

A.3 The GEF Agency’s comparative advantage: N/A

⁴ For questions A.1 –A.7 in Part II, if there are no changes since PIF and if not specifically requested in the review sheet at PIF stage, then no need to respond, please enter “NA” after the respective question

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

Climate Changes, vulnerability and risks in Maradi Region

The Maradi region straddles the Sahelian and the Sahelo-Saharan zones. The climate in this region is semi-arid Sahelian climate characterized by high variability in rainfall that is irregularly distributed over time and the region causing recurrent droughts. Rainfall lasts no more than 4 months, and rains are irregular and poorly distributed in space and time.⁵

Climate change projections conducted at the national level as part of the elaboration of the NAPA and the Second National Communication (SNC),⁶ show a slight decrease in rainfall at the Maradi station. The driest scenario shows a decline of 6% and 9% in precipitation by 2050 as compared to the reference periods 1961-1990 and 1991-2010 respectively. All models predict an average increase in maximum temperatures between 2.5°C and 3.3°C for the Maradi region by 2020-2049. Most recently, the projections conducted as part of the AAP in Niger show an increase in maximum temperatures between 1.2°C and 2°C by 2050 as compared to the reference period 1961-1990.

The NAPA and the SNC have highlighted the four following different types of **climate change risks** relevant in Niger: increase in the frequency and intensity of drought; heavy rains/floods/high winds; sand/dust storms; and extreme temperature/heat waves. These four risks have been confirmed during the Project Preparation Grant (PPG) design process through the mandated climate risk study. They are described as follow:

- Increase in the frequency and intensity of drought: this is characterized by a progressive increase in temperature, a decrease in rainfall, a decrease in the number of rainy days and a decrease in the rainfall/potential water loss ratio. Droughts have a critical impact on certain stages of crop growth (increased demand for water), leading to lower yields or crop failure, capital loss, increased poverty, food imports and aid, reduction of water resources.
- Heavy rains/Floods/High winds: heavy rains accompanied by high winds often cause the submersion of arable lands leading to erosion, leaching and loss of arable land, and silting of rivers; local flooding in riverside residential areas leading to losses of young plantations, damage to buildings and infrastructure, health effects, loss of agricultural production and stocks.
- Sand/dust storms: the erosion of sandy soil by string winds causes severe damage with loss of seedlings, reduced agricultural production, damage to infrastructure, and effects on health.
- Extreme temperature/heat waves: cause serious public health problems (epidemics of meningitis, measles, worsening of cardiovascular diseases among the elderly, etc.), increased energy and water consumption.

Forecasted Impacts of Climate Change on Key Sectors

The key most vulnerable sectors to climate change in Niger and in the Maradi Region and where adaptation should be urgently addressed are agriculture, livestock production, health and water resources. The main anticipated direct and indirect impacts (by 2025) of climate variability and change on these development sectors are as follows.

- Agriculture: Food security may be further compromised in the future due to the important gap between food needs of a rapidly growing population and agricultural output. The increase in temperature and the decrease in rainfall will lead to further reductions in the duration of the rainy season, increased evaporation and desiccation of already poor soils thus impacting agricultural calendars.
- Specific projected impacts for the agriculture sector include: (i) a decrease in the growth cycle of millet by 2 to 3 days by 2020 and 4 to 5 days by 2050; (ii) a decrease in yields of main cereal production (millet, sorghum and cowpea) from 4.6% to 25%; (iii) a physical and chemical degradation of soils leading to a

⁵ Gouvernorat de la Région de Maradi. *Rapport Diagnostique et d'Orientation sur les axes de développement dans le cadre du Schéma Régional d'Aménagement du Territoire (SRAT) de Maradi 2008-2023*. Mars 2009

⁶ SNC

decrease in agricultural and fodder productivity; (iii) impossibility of growing some cereals such as wheat or tiger nut; (iv) an increase in conflicts for land access; and (v) rural exodus.

- **Livestock:** Livestock breeding is a significant livelihood activity for a significant number of rural people, especially in the north of the Maradi region (departments of Dakoro and Bermo). It could be affected by the change in rainfall patterns and the increase of temperature by limiting access to water and fodder. This, in turn, is likely to exacerbate conflicts between farmers. Men and animals will tend to migrate towards more productive areas thus exacerbating conflicts between farmers and breeders. Livestock dangers could lead breeders to switch to other types of activities leading to changes in habits and customs. Livestock numbers have been shown to drop by up to 50 % during serious drought periods in Niger. At the macroeconomic level, the livestock sector which is the second mainstay of the national economy would no longer contribute as much as in the past to the country's GDP's balance of trade.
- **Forestry:** The observed reduction in forest cover since 1970 due to anthropogenic factors and effects related to climate variability and change will continue. Climate change will seriously impact the biodiversity of national forests. Ultimately, this will lead to deforestation that will further impact negatively on the climate, resulting in dryer conditions. As mentioned in the SNC, the projection by 2025 shows that the forest degradation process will increase. Disadvantaged rural populations will use species, which in the past were less preferred for firewood. Moreover, climate change will impact biodiversity of national forests: medicinal plants used in traditional medicine could disappear with, as a direct effect, the switch of traditional practitioners to other types of activities leading to changes in habits and customs.
- **Water Resources:** Projected variations in precipitations and temperatures in the Maradi Region will cause decrease in runoff, increased erosion, changes in the hydrological regime of the Niger River and its tributaries, the lower volume of water reservoirs and dams as well as declining groundwater recharge due to an increase of evaporation, increase in magnitude and frequency of flooding and deterioration of water quality. Many rural communities in Niger obtain their water from natural ponds or lakes. An increase in the frequency of droughts as a consequence of climate change has already resulted in the drying up of numerous ponds, a process that is likely to intensify. The scope and frequency of floods will increase notably in the southern band of the country, including the Maradi region. This increase will result from the expected rise in the frequency of episodes of heavy rainfall. Drinking water availability will be negatively impacted.
- **Health:** Increases in average temperature during the rainy season will lead to increased frequency and incidence of malaria, meningitis, measles and respiratory diseases. Overall, it is predicted that the quality of life will be negatively impacted as well. Flooding could displace populations while destroying infrastructure, reducing the supply of potable water, all of which could facilitate the spread of diseases. The decrease in precipitation in Maradi could lead to an increase of the time period conducive to the development of measles. More generally, the quality of life will be negatively impacted.

Most of the socio-economic activities are already affected by observed climate change impacts. It is projected that these impacts will be exacerbated in the near future. Examples of current and possible future impacts and vulnerabilities associated with climate variability and climate change are provided in IPCC WG2 report (2007), which mentions for West Africa in particular: Impacts on crops and possible agricultural GDP losses. The report adds that additional risks that could be exacerbated by climate change include greater erosion and deficiencies in yields from rain-fed agriculture with small-scale farmers being the most severely affected. These impacts will likely cause, among others: loss of incomes, decrease in the quality of life, population displacement and decrease in agricultural production.

The following table (Table 1) outlines the main forecasted climate change impacts, based on the projection of a decrease in precipitation and an increase in temperature, for the two principal economic sectors in the Maradi Region, agriculture and livestock raising.

	Droughts	Floods
Agriculture	<ul style="list-style-type: none"> • Decrease in water availability and decrease in hydrological regimes; • Loss of crops and decrease in production and yields; • Field fires and bush fires; • Disturbances and changes in agricultural calendar and in crop development; • Soil desiccation. 	<ul style="list-style-type: none"> • Submersion of productive and arable lands; • High air and soil humidity; • Development of crop pathogens; • Disturbances in agricultural calendars and in crop development; • Displacement of crops in low productive areas
Livestock raising	<ul style="list-style-type: none"> • Decrease in water availability; • Grazing and fodder shortage; • Livestock loss and decrease in production; • Feeding competition between humans and animals; • Animal dehydration; • Development of respiratory diseases; • Increase in livestock mortality. 	<ul style="list-style-type: none"> • Submersion of grazing and fodder production lands; • Development of water borne diseases; • Feeding concurrency between humans and animals; • High air humidity.

Table 1 – Forecasted Climate Change Impacts for the agriculture and pastoralism sectors

The vulnerability of women and female-headed households is likely to increase with the negative impacts of climate change. As shown by the gender study conducted as part of the PPG, women are often the victims of gender-based inequality in rights, resources and voice as well as in household responsibilities. Women are in charge of most of the low remunerated and low socially valued activities including social reproduction, small-scale asset production, and some basic community activities due to their place within households. Although these three strategic roles represent a considerable contribution of women to the social system, they also represent some constraints to their autonomy and liberty. Women consequently are likely to suffer more damages from climate risks and have a lower capacity to adapt.

Climate change impacts are also likely to be heaviest for vulnerable groups including women, children and the elderly. Referring to the agro-climatic zones:

- In the agriculture area, climate change impacts on population will lead to an exodus of rural men young people, and also to some cases of divorce, leading to changes in social situation: women may increasingly become heads of households with all the related efforts required to respond to households needs.
- In the middle area, impacts will be almost the same as in the agriculture area.
- In the pastoral area, the opposite situation may be observed. Women will be more affected by exodus, leaving their husband alone in charge of livestock, elderly and young. This will negatively affect the social fabric of the community living in the north.

Women and children are largely responsible for the collection of water and firewood, as well as other natural resources for household use. In a context like Niger where just over half of the population has access to improved drinking water, an additional impact of drought is that women may have to go further to access drinking water, affecting their ability to engage in productive labour as well as subjecting them to increased physical danger by travelling alone, even further from home.

As stated in the mid-term evaluation of the CARE/ALP program, although 95% of women are illiterate, they are aware of the effects of climate change on their habits and way of life, and about the long term aspects and irreversibility of this phenomenon. Women are still a minority in the community-based early warning and emergency systems (Système Communautaire d'Alerte Precoce et des Reponses aux Urgences SCAPRU) developed as part of the SAP, and also in civil society organizations and in local governments. Due to the role women can play in community-based adaptation, climate change may also have positive effects on gender aspects.

Baseline Projects/initiatives

Baseline for Component 1

Co-financing projects

The LDCF funded project builds on the Government of Niger initiative on Food Early Warning System (*Système d'Alerte précoce-SAP*). Recurring food insecurity crises have led the authorities to establish ad hoc management bodies, including the **Early warning system** (SAP), directly connected to the office of the prime minister. In Maradi region, the SAP is carrying out missions every year, which include the following: (i) analysis of current or structural vulnerability; monitoring of conjunctural vulnerability to measure the shocks to which populations are subject more directly; (ii) the synthesis of all information produced by different information bodies, to establish a complete picture of the food access situation; and (iii) definition of urgent assistance needs and, sometimes, the implementation of crisis mitigations measures (food aid, etc.). Since the establishment of the 'food crisis task force' to deal with crisis management, the SAP is rather focusing on gathering information. In addition, a Sub-regional Committee linked to the SAP was put in place in Maradi, as well as Community Early Warning Systems and Emergency Responses (SCAPRU – *Système Communautaire d'Alerte Précoce et des Reponses aux Urgences*) in some communities. **The expected co-financing associated with SAP activities is USD 500,000** (see attached co-financing letter from the Prime Minister Cabinet). The SAP has a good experience in terms of food security risk assessment, detection, monitoring and prediction. The institutional framework of SCAPRU and SAP could serve as basis for the climate risks information/management systems to be developed under the LDCF financed project and even be extended to the specific problems of climate change.

However, in order to do so, a number of needs have to be addressed for allowing an effective climate risks management, specifically the production and dissemination of climate information. Climate information necessary for adequate planning and sustainable management of risks and natural disasters are not currently available to local decision-makers, grassroots communities and technical services. Information is currently lacking on how and under which conditions community-based and decentralized development approaches can help reduce climate change related vulnerability, enhance adaptive capacity, and promote sustainable livelihoods. Climate risk information, adaptation options and knowledge are not shared and disseminated as widely as needed to enable cross-communal learning. The system of meteorological data collection and diffusion is currently not appropriate (incomplete data collection, weak analysis and diffusion). Climate data are not automatically collected at the local level, and when it is collected, there are some delays in transmitting the information to the central level. As a consequence, meteorological advice to local communities is non-existent.

Moreover, the system for collecting and distributing meteorological data is not, at the time, appropriate (incomplete data collection and weak analysis and diffusion). The system consists of four types of weather stations in the Maradi region: (i) the synoptic station in Maradi able to take all meteorological readings every hour; (ii) the climate station at Tessaoua that measures rainfall, temperature, and humidity three times per day; (iii) the rain station at Dakoro; and (iv) decennial data collected during the growing season. Manual rain gauges were also installed under the first LDCF financed project and for CARE/ALP. A member of the SCAPRU usually takes Raingauge readings. However, despite placing rain gauges in communities, climate data are not systematically collected at the local level, and when they are, there is a delay in transferring the information to the central level. Collected data are not analyzed and incorporated in decision-making at the local level. Moreover, seasonal forecasts are not transmitted to communities. The network for observing meteorological conditions needs to be strengthened at the local level by installing automatic rain gauge stations that will provide systematic rainfall data to the DMN and through developing the technical and infrastructure resources of meteorological data collectors and analysts.

Other relevant initiatives (non part to the co-financing)

The GEF project is also built on existing initiatives that promote best adaptation practices supporting local deciders to mainstream climate changes issues into local development plans.

- In the Commune of Roubou, support from the first UNDP support LDCF financed project (NAPA Agriculture) contributed to building capacities of municipal leaders and technical services to understand climate change risks and plan to mitigate these risks. Climate change aspects have been mainstreamed into the Communal Development Plan (PDC). This work, however, was not duplicated in the PDCs of

adjoining municipalities targeted by the project CBA-Maradi. Moreover, implementation of the PDC in the municipality of Roubou now needs to be supported to make the adaptation actions identified there effective. The PDCs exist in all municipalities, but the majority does not take into account climate change. Municipal councils do not have the information or tools needed to integrate climate change into the PDCs. CNEDD developed guidelines on Integrating Climate Change Dimensions (ICCD) into community planning in 2012. The guide supplements the national guidelines on creating PDCs and identifies ways to introduce dimensions of climate change into these guidelines. This guide will be used under the CBA-Maradi project to mainstream climate change and adaptation in PDCs for targeted municipalities. Efforts for awareness-building about climate change and adaptation were also conducted through the first LDCF project with certain rural communities in the municipality of Roubou. Awareness-building activities should now reach a larger population to promote behaviour change that is impactful. The first LDCF financed project will be officially closed in March 2014 and can therefore not be considered as a potential co-financing.

- In Bader Goula, Azagor, Soly-Tagriss and Roubou in the Department of Dakoro, the project ALP/CARE is facilitating a participatory community based adaptation action planning process. Action Plans for Community Adaptation (*Plans d'action pour adaptation communautaire* - PAAC) were also created for one community in each of the four municipalities, including seven well-defined strategies for adaptation. A feasibility analysis and a gender analysis of these strategies were also done prior to approval. This support has created, to some extent, a space to build the capacities of targeted rural communities and CBOs to understand local climate hazards and risks and identify climate change adaptation strategies. Nonetheless, the PDCs in the four-targeted municipalities have not yet taken into account the PAAC in their revisions. According to the mid-term evaluation of ALP done in the 2012, municipalities also expressed the need to have more PAACs (have a critical mass of PAACs in the municipality). However, the **programme ALP officially closed in December 2013** and had limited financial means and couldn't support the creation of more community adaptation action plans alone. The project ABC-Maradi could take up, adapt and duplicate this.
- The Community Action Project for Climate Resilience (CAPCR - USD 63,000,000 under the Climate Investment Fund). The CAPCR is one of four projects supported under the Pilot Programme for Climate Resilience (PPCR). Niger is one of the nine countries involved in this programme supported by Multi-lateral Development Banks (MDBs): World Bank (WB), African Development Bank (AfDB) and International Finance Corporation (IFC). Under this programme, Niger developed its Strategic Program for Climate Resilience (SPCR) that was endorsed in November 2010 by the PPCR Sub-Committee. The WB supports the CAPCR. Its objective is to improve the resilience of the populations and of production systems to climate change and variability in targeted municipalities. It includes three components: (i) mainstreaming climate resilience into development strategies at national and local levels; (ii) integrating climate resilience practices into agro-sylvo-pastoral systems and local populations' social protection measures; and (iii) ensuring coordination of all the activities of the project, including monitoring and evaluation activities, and SPCR overall strategic coordination. In the Maradi region, the CAPCR will be active in the Communes of Bader Goula, Birni Lalle, Kanembakatché and Kornaka. It is suggested to work in tandem with this initiative and target-adjoining municipalities to the four targeted ones by this project (see introduction to demonstration sites below). This will help increase the geographic scope of the CAPCR in order to contribute to upscale adaptation approaches. The LDCF financed project team will closely work with CAPCR project team on the ground to ensure close coordination and collaboration. TO strengthen synergies and complementarities, a representative of the World Bank or of CAPCR will be invited as an observer to the Project Board which will be annually meeting.

Those initiatives will provide a good basis from which to plan for climate change at the local level and will contribute to strengthening the overall capacity of local decision makers and targeted rural communities of a few municipalities to understand climate change risks and their impacts on local development. However, the large majority of institutions and organizations present at the regional, departmental, municipal and community level do not always have the institutional or operational capacity needed to promote effective adaptation planning and effective implementation of resilient practices in the face of climate change. The needs felt by different key political, administrative and elected actors and technical providers for strengthening their skills are the following:

(i) training in advocacy and negotiating; (ii) information, education and communication on general environmental themes and particularly climate change; (iii) training in local natural resource management; (iv) awareness-building and training for political, administrative and traditional leaders on gender issues; (v) training of extension workers in assessing environmental vulnerability of communities to climate change; and (vi) training of extension workers in integrating climate change aspects into development plans, projects and programs – especially the Regional Land Use Plan of Maradi (SRAT). Moreover, infrastructure and logistical resources (such as motorcycles and GPS units) for the newly created Livestock and Environment regional directorates of Bermo should also be strengthened, since communities in this area, which are primarily pastoralists, are often far away from each other. Weather extension services in Maradi and Dakoro, due to their lack of resources on the one hand and their important role in collecting agro-climatic data and advising communities on the other, should also be strengthened through tools, technical equipment and training by way of the agreement between the Project and the National Directorate for Meteorology. The Departmental Land Commission (COFODEP) will bring support to the Communal Land Commission (COFOCOM) and the General Land Commission (COFOB) within the framework of securing restored pastoral areas. The Departmental Chamber for Agriculture will be contributing to the networking of farmer organisations (improved seeds, garden farming, etc.) in order to strengthen the sale of their production. These two structures will need support to carry out their mandates successfully. At the local level, extension services are mostly absent, consultation frameworks for development actors are weak, and town halls grossly lack human resources, finances and materials.

Baseline for component 2

Co-financing projects

- The development baseline initiatives are focused on contributing to the strategic response of challenges posed by poverty in the Maradi region. The Joint and collaborative Programming Actions – Government, UN and Bilateral Partners- in Maradi Region (MJP) is designed to implement, at the regional level, activities that aim to reduce poverty and achieve MDG-related targets in the region. Initial investments from the MJP and further investments considered as co-financing to this LDCF financed project (**estimated to be \$13millions**) have significantly strengthened small farmers’ access to improved seeds (rain-fed and irrigated crops, millet and black-eyed peas), fertilizer, inputs and other products and equipment. Access was improved by strengthening the distribution system for inputs through input stores that offer diversified services, are nearby and have competitive prices. These include: sale of agricultural inputs (fertilizer, improved seeds, pesticides, etc.); renting of agricultural equipment (machines for phytosanitary treatment, hoes, wheelbarrows, carts, motor pumps, etc.) and; phytosanitary treatments with trained staff authorized by technical services in vegetal protection. This access was mainly strengthened in the Departments of Madarounfa and Aguié. Farmers in Dakoro and Bermo still have only limited access to agricultural and livestock raising inputs.

The MJP also strengthened water management for developing irrigated crops and reducing agricultural production’s dependence on climate hazards, mainly by creating the following: two equipped bore holes; two water collection and distribution basins; two irrigated school gardens with solar equipment; two motor pumps of which one is provided and installed on site in Tibiri; and tilling equipment in three sites where conditions for gardening are favorable–Tibiri, Kodrawa and Bakaoua. Investments were created in the Department of Guidan-Roundji, Aguié and Madarounfa and have not been targeted to the Department of Dakoro and Bermo. Additional financial support is necessary to reinforce water management in these departments and increase the surface area of irrigated farming.

- The LDCF financed project is designed to take opportunities in the microfinance sector to support poor households in accessing to credit and sustain their IGAs. Under the “Support to Micro-finance Development Project” (PADMIF, co-financing \$1.4millions), started in February 2011 for a five-year period, about 22 Local Financial Institutions (SFD – *Systèmes Financiers Décentralisés*) in Mayahi, Aguié, Maradi Ville and Dakoro will be supported. The project is providing credit lines and letters of guarantee, among others, to the supported SFD. The partnership between MFIs and the banking system is also strengthened and new products adapted to poor households are under development. Capacities are also provided to MFIs in the management of financial transparency. Finally, the PADMIF places a strong emphasis to information, education and support to women excluded from the financial system.

Access to affordable credit is not easy in Niger rural areas due to various factors. Access to market and trade is also quite limited. Studies conducted in the frame of the Regional Development Plan of the Region show that despite the potentialities of Maradi with regards to agricultural production and trade, these are still underexploited due, among other things, to the lack of information on climate related risks, a low entrepreneurial culture, lack of information on markets and value chains, and the lack of financial and banking institutions. Current level of access to credits at local level in the region of Dakoro is low. Recent studies from Nigerian Observatory of Poverty and Human Development reveals that it is very difficult for rural households, specifically women, to access credit, markets and undertake new entrepreneurship. Women are constrained by a whole range of economic, social and cultural factors that prevent them to access successfully to financial services and markets⁷. This situation led most of women to be more active in income generating activities that are real opportunities to contribute to the household expenses such as: small business, small restaurants, processing and breeding small ruminants. AGR are practiced by women of the region seems to be very important with a proportion of 73.2%. However, it should be noted that only 20% of women have received financial assistance to develop an IGA. Moreover, the small amount of credit granted is insufficient to cover their actual financing needs. PADMIF will contribute to strengthen this level of access, mainly through support to local SFD. The LDCF financed project will build synergies with PADMIF to strengthen access to credit for targeted households in order to support the development of IGAs which design will be supported under this GEF initiative.

Complementary initiatives (non part to the co-financing)

- Resources from the first LDCF financed project have supported the implementation of a set of community-based adaptation practices and measures in Roumbou in the Maradi region. A wider audience should now scale practices and measures that have proven to be effective up for adoption. Such measures include the following: development, test and diffusion of improved seeds; collection of fodder seeds and pasture seeding, Soil Protection and Restoration/Soil and Water Conservation (SPR/SWC) activities and climate resilient income generating activities. The CARE/ALP programme has also developed a portfolio of small-scale CBA projects and demonstrated specific adaptation models and strategies at the local level. In total, 2,000 persons (men and women) received technical and financial support in the following adaptation-related practices: (i) diffusion of early maturing millet and black-eyed peas adapted to current rains and dry seasons (a crucial time when farmers often go into debt); (ii) set-up of a sustainable supply chain of improved seeds by creating a network of improved seeds producers and sellers; (iii) adaptation of growing practices such as seeding more densely new varieties; (iv) using rainfall data from rain gauges to determine the optimal date for seeding; (v) developing certain climate-resilient income-generating activities (CR-IGAs) for women through small-scale credit organisation (cell phone cards, etc.); and (vi) support for social redistribution of small livestock in an adapted version of the traditional system of “Habbanae,” which facilitate farming and livestock raising complementarities for vulnerable women. In total, throughout the first LDCF financed project and CARE/ALP projects 12 improved seed producers for millet, sorghum and black-eyed peas were trained and installed with technical and financial support. Their number, however, is currently insufficient to produce the quantity of seeds needed for all farmers in the targeted municipalities. Additional support should be allocated to increase the number of seed producers and to structure the organisation of seed production. Moreover, no research or development activities were conducted on improved seeds for peanuts or tiger nuts.
- Regional initiatives on agriculture, supply chain, water and land management: Supply networks for farming inputs and equipment can be grouped into four types: (i) the Central Inputs and Agriculture Equipment network (CAIMA) subsidized by the state along with technical and financial partners; (ii) systems put-in place through projects; (iii) the private sector; and (iv) the informal market. At the regional level, CAIMA has 23 points of sale of which one is in Dakoro and one in Kornaka. While 37 private inputs shops exist in Dakoro, only 16 are certified. Moreover, these stores are not entirely operational or completely stocked. In

⁷ Observatoire national de la pauvreté et du développement humain durable (ONAPAD) Nov. 2012 : contribution des femmes aux dépenses des ménages et à la réduction de la pauvreté à Maradi

general, farmers and vulnerable households do not have access to inputs at these stores as the prices are too high.

The Maradi region has strong potential for irrigation linked to water spreading thresholds and dams that are at present not being taken advantage of. Water resources for agriculture are available in the Tarka Valley in the north (Korahane, Dakoro and Azagor municipalities). Small-scale irrigation is being used in the municipalities of Adjekoria and Korahane. Current irrigation systems in Dakoro department use receding flood waters, manual systems, garden wells and motor pumps. There is strong potential for development and diffusion of these systems, mainly to the municipalities mentioned above.

While SPR/SWC measures have been implemented for some years, agriculture and forestry soils in the intervention zone are relatively poor and subject to constant land pressure. Degradation and reduction in soil quality has been noticeable over the course of the previous decade. Diffusion and promotion of SPR/SWC measures should be followed to guarantee productivity of farmland in the long term.

Although recent support for different initiatives has produced excellent examples of adaptive and resilient measures and practices at the local level, there is insufficient technical, institutional and financial capacity at the local and departmental levels to scale up these measures and practices. Pilot initiatives have only supported isolated communities and were limited in geographic extent. They have highlighted and supported new climate-resilient practices and technologies, and now these practices need to be spread to a wider audience through additional support.

Additional co-financing provided in cash and in-kind

CNEDD, the executing partner for this initiative, will provide in-kind contribution estimated at USD 200,000 to the project implementation. This in-kind contribution includes the focal point salaries for this initiative that will be based in CNEDD office in Niamey and will assure communication between the Project Implementation Unit based in Dakoro and the institutions in Niamey. In addition to that, CNEDD contribution will cover office maintenance and running costs (electricity, water, etc.) in Dakoro.

UNDP Country Office will co-finance in cash this initiative for an amount estimated at USD 525,000. The UNDP Trac contributions includes: (i) Purchase of two vehicles; (ii) Recruitment of seven UNVs, one for each intervention municipality; (iii) Contribution to VNU operation costs; (iv) transportation equipment; and (v) Computers and additional IT's equipment.

Long-term solution and key barriers

Despite different strategies, policies and measures, the current socio-economic situation across Niger and particularly the Maradi Region is characterized by weak resilience to climate change and climate variability. As described above, community livelihoods based mainly on agriculture and livestock farming, are going to be increasingly affected by climate variability and change; the forecasted climatic changes in the coming decades are likely to negatively impact the productivity of the agro-pastoral activities causing severe hardship in villages, and contributing to increased poverty and undermining national development.

The long-term solution would be to promote the sustainable adoption of local and community-based integrated and climate resilient agro-pastoral systems and practices to allow for productivity improvements in farming practices and a more sustainable management of agricultural landscapes, grazing areas, and water resources. The natural continuation to the first UNDP support LDCF financed project is to start a process of scaling-up proven adaptation practices at the sub-national/regional levels to catalyze climate-resilient development in the most vulnerable sectors (agriculture, water, and livestock). Through this second initiative, a critical mass of rural communities becomes resilient to climate change stressors, including variability, municipality-wide through the scaling-up of CBA initiatives, thereby generating synergies among communities in terms of knowledge, social capital and sub-regional economies, as well as creating resilience benefits across regions. This second phase will likely be built on mainstreaming climate issues into development plans and strategies at the local and regional levels, creating the necessary capacity to adopt and implement adaptive rural and farming systems and measures informed by good climate and farming technical advice, and supporting a process to achieve more climate resilient economies.

However, scaling up community-based adaptation, in the context of a non-mature decentralization process, poses challenges that can hamper the development of climate adapted local governance. A number of barriers have to be removed in order for the preferred situation to be achieved and to increase the resilience of Niger's regions to climate change. These barriers are related to the biophysical environment, availability of financial resources and institutional capacity. A list of barriers that will be confronted at the local, provincial and central level is presented below.

Key Barriers to overcome

Insufficient capacity of local communities, extension services and decentralized institutions to upscale and disseminate adaptation practices, implement new measures (including climate-resilient activities and practices) and to use new technologies

Although excellent examples of adaptive and resilient measures and practices have been developed and implemented at the local level through support of other initiatives (for instance the first UNDP support LDCF financed project, CARE/ALP, CAP 2 and CAPCR), to date there is insufficient technical, institutional and financial capacities at the local and provincial levels to uptake and upscale these measures and practices. These initiatives have demonstrated significant learning, as well as the development of a national process for addressing community-based adaptation in Niger. However, discussions with government officers, project managers, regional and local partners have highlighted several bottlenecks to the scaling-up of CBA in Niger and in the Maradi region. These include:

- Limited local governance to strengthen communities' resilience: Local authorities are a key component of local development and poverty alleviation in Niger. They have shown an obvious comparative advantage and can trigger collective efforts at the grassroots level to build resilience to disasters. However, social forces and resources available at the local level are not mobilized and organized around the issues of climate change adaptation by municipality leaders. Despite recognition of the critical role of local institutions in facilitating adaptation of rural populations to climate change, little systematic analysis has been done to identify the factors of successful performance in strengthening climate resilience, the roles of different local institutions in climate adaptation, the features of institutions that are important for successful adaptation and the support they require to enhance their role in facilitating adaptation. Furthermore, the availability and the implementation of local climate change management tools are still limited. For instance, except for the municipality of Roubou that has been supported by the first UNDP support LDCF financed project, none of the Communal Development Plans (PDC) of the municipalities in the Maradi Region includes strategies, activities and/or options that tackle future climate change. In each municipality, PDCs do exist, but they do not consider climate change issues. As it appears, when preparing these plans, the municipality councils did not have the information and the tools needed to integrate climate change concerns into these plans. Therefore, support for mainstreaming climate change within PDCs is needed.
- Limited capacities and awareness of local government: local governments do not currently have the minimum capacity and awareness to manage future climate variability and change effects. The implementation level of PDCs is weak and there is a strong need to concentrate energies on climate resilient activities and investments, integrating climate change risks into the budgets. In this regard, general knowledge of climate change and how to integrate it into development planning and strategies is lacking at the prefecture and municipal levels, calling for important capacity building efforts. This also applies at the regional level, where Regional Development Plans and Regional Land Use Plans need to integrate dimensions of climate change. Building capacities for local leaders and extension services at the municipality level in the most vulnerable municipalities of Niger to upscale community-based adaptation is therefore critical.
- Women in Niger are not always sufficiently involved in decision making processes, especially at the local level. Mobilizing women's groups is essential for improving the resilience of rural communities. Moreover, concrete examples highlight the importance of particular adaptation strategies under the leadership of women's organizations, which are powerful agents of change.
- Limited scope and financial resources of past and current adaptation initiatives: All existing community-based adaptation programmes are limited in geographic extent and lack sufficient resources to comprehensively finance adaptation activities. They have only supported isolated communities and were

limited in geographic extent. They do not encompass a sufficient number of municipalities and thus do not generate a critical mass of climate-resilient rural producers capable of inspiring and promoting transformative change across communities and across regions. They have highlighted and supported new and climate-resilient practices and technologies, for which scaling-up requires additional and targeted support to reach a broader audience. There is need to support and implement climate-resilient activities and new technologies at a wide scale, ensuring that a sufficient number of local stakeholders adopt and diffuse them. In this context, scaling-up and/or replicating adaptation efforts in vulnerable municipalities in Niger has been inadequate to ensure climate resilience at the regional scale. This will be made possible by supporting a sufficient number of adjoining municipalities.

- Limited capacities of local communities to upscale CBA: Local communities have currently insufficient capacity to implement identified climate-resilient activities/practices across landscapes, agro-climatic areas and adjoining municipalities. There is a need to document and highlight best adaptive measures and practices, and provide financial and technical support to local communities to uptake, adopt and implement them.
- Low technical and institutional capacity of the extension services: Extension services at the prefecture level are responsible for supporting local communities in the implementation of development initiatives and in capacity development. However, these extension workers do not currently have the technical, financial and material resources to ensure these goals are achieved. On the whole, public services at the national and local levels have suffered from weak coverage, and agricultural extension services as well as meteorological support services are therefore ineffective. This results in a low institutional capacity of the decentralized administration. The technical support provided by extension services and research organizations at the local level is weak, mainly due to the lack of financial capacities to actually ensure government state support to agricultural and local development. Furthermore, there is a lack of research based techniques to increase community and farming resilience through for instance, improved seeds, drought and/or flood resilient farming techniques, etc. All new measures or practices need to be adapted to local conditions and secondly, for each new measure, the villagers, communities and government extension service staff require new skills and/or training. Therefore, the technical support from extension services needs to be improved, and farmers need to be provided with information and demonstration of climate resilient adaptation options.

Low technical and financial capacities of farmers in the Maradi region

Farming in the Maradi Region is characterized by (i) low productivity; (ii) a fragile natural resource base; (iii) the weak use of agricultural inputs (inexistence of efficient input distribution systems in rural areas); (iv) dependence on rain; (v) the quasi inexistence of farming equipment with agriculture essentially manual. The Region was the epicentre of food crises that followed severe droughts in 2005 and 2010. Furthermore, the high population growth (based on data from the Maradi Regional Development Plan, it is expected that the population of the Region will be around 5 million by 2023) could lead to an inappropriate intensification of agricultural production (access to inputs is very limited). Fallow periods are non-existent in the agricultural area and very short in the agro-pastoral area. As a consequence, yields are very low and most of the rural inhabitants remain in extreme poverty.

Due to low agricultural income (because of weak productivity, poor storage, transport, and commercialization facilities) and scarce access to credit, farmers do not have the necessary financial resources to buy good quality seeds and undertake the required agricultural investments to foster agricultural production (equipment, inputs and irrigation equipment).

Furthermore, pastoral activities are mainly extensive and fodder production is currently underdeveloped. Breeders have a limited access to financial resources and cannot afford drugs, supplementation or other investments necessary to improve livestock production.

Finally, co-existence between herders and farmers has been decreasing over the past years due to the mismanagement of ecosystem services and natural resources leading to conflicts over competition for access to diminishing stocks of land and water. The high population growth has led to the displacement of agricultural production in the north of the Maradi region where lands are traditionally used by breeders for grazing and

fodder production. This has resulted in conflicts between farmers and breeders over access to arable land. Climate change could exacerbate conflicts between farmers and breeders over time.

Lack of information, notably with regards to climate, meteorology and climate change

Information is currently lacking on how and under which conditions community-based and decentralized development approaches can help reduce climate change-related vulnerability, enhance adaptive capacity, and promote sustainable livelihoods. Climate risk information, adaptation options and knowledge are not shared and disseminated as widely as needed to enable cross-municipal learning. Cross-cutting efforts to codify and disseminate CBA best practices are insufficient, and knowledge sharing among vulnerable communities on how to address a changing climate is poor. Only a limited number of organized efforts to ensure such cross-community learning are currently happening in Niger's vulnerable communities.

Furthermore, the system of meteorological data collection and diffusion is currently not appropriate (incomplete data collection, weak analysis and diffusion) and needs strengthening through the development of appropriate capacities for meteorological data collectors and analysts. Currently, there are 4 kinds of meteorological stations in the country: (i) the synoptic meteorological stations which collect data on all meteorological parameters every hour—there is one synoptic station in the Maradi Region located in the city of Maradi; (ii) climate stations that collect data on rainfall, temperature and humidity three times a day—there were 15 stations before but only 13 are functional due to a lack of staff—one of these stations is located in Tessaoua in the Maradi Region; (iii) rain gauge stations which provide information on rainfall—there were 200 but they are now not all functional due to financial constraints; and (iv) the collection of data every decade during the agricultural campaign. There is a need to strengthen the meteorological observation network at the local level by installing new automatic rain gauge stations that would automatically provide data on rainfall to the National Directorate of Meteorology (DMN).

At the central level, the DMN has been equipped through support of the first UNDP support LDCF financed project to ensure appropriate coordination, processing and treatment of the information collected. However, the data is not automatically collected at the local level and when it is collected, there are delays in transmitting the information to the central level. This results in a very limited number of meteorological bulletins disseminated. At the local level, farmers do not have access to relevant meteorological predictions. Although there are a number of empirical ways to predict the weather, farmers cannot currently plan their work according to scientific predictions, as it is not adapted to their needs. For example, seasonal predictions would be very useful for agricultural planning. Decennial forecasts at the local level would also be well-adapted to the needs of farming activities.

As a consequence, meteorological advice to local communities is non-existent and an agro-hydro-meteorological advice system needs to be designed in order to analyse predictions and meteorological information processed by the DMN, assess their consequences on agricultural and livestock sectors and relay the information to farmers. Planning adaptation measures is more difficult for communities if and when they do not have the most up-to-date information; this therefore constitutes a key barrier to adaptation.

Low financial and technical capacity of most households

As mentioned above, the Maradi Region is considered to be the poorest in Niger. This affects the adaptive capacity of local communities. They have limited access to financial means and options and they lack financial capacity to implement resilient farming techniques and income generating activities. As the evaluations of many existing initiatives show (incl. Care ALP and the first UNDP support LDCF financed project), income generating activities have yielded significant results where they have been supported and have proven sustainable through an emphasis on communities' and local authority's empowerment and ownership. They have played an important role in reducing their vulnerability by providing alternative climate-resilient livelihoods. However, as the evaluations highlight the need to further strengthen local communities' capacities, especially with regards to products sales and transformation, so as to ensure higher income generation and long-term sustainability. Access to credit also allows for the communities to develop the IGAs of their choice and which are most suited to their environment. Access to affordable credit is not easy in rural areas due to various factors. As a consequence, low-cost adaptation options need to be disseminated and demonstrated, and access to microfinance systems need to

be facilitated to support resilient income-generating activities and the implementation of more resilient farming initiatives.

To conclude, the scaling-up of community-based climate resilient practices and measures faces a series of barriers including: (i) insufficient financial and technical support provided to identify and disseminate existent climate-resilient practices and technologies and good practices and to generate a sufficient number of climate-resilient stakeholders within adjoining municipalities capable of inspiring and effecting transformative change across regions; (ii) capacity and quality gaps in the climate and adaptation information supply chain that result in under-performance of the meteorological information and early warning systems and thus in correspondingly poor adaptation decisions; (iii) policy, institutional and strategic instruments at the regional and municipality levels that fail to take into account new patterns of risks brought about by climate change and that do not provide sufficient incentives for key stakeholders to adopt climate-resilient agriculture strategies and practices; and (iv) insufficient capacities of farmers and breeders and their leaders to identify, adopt and implement adaptive measures.

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

Additional Cost Reasoning of the Proposed Project

Although a number of initiatives have been recently undertaken to demonstrate and develop pilot adaptive and resilient measures and practices at the local level, there is to date insufficient technical, institutional and financial capacities at the local and regional level to uptake and upscale these community-based adaptation practices and to ensure the resilience of local socio-economic activities, including agriculture and livestock breeding and to overcome forecasted climate change risks.

These pilot initiatives have been limited in geographic extent and have only supported isolated communities. In a specific area and/or municipality, they have not been able to reach a sufficient number of rural stakeholders capable of ensuring the wide adoption and diffusion of promoted climate-resilient practices at the municipal and regional levels. Furthermore, local governments do not currently have the minimum capacity and awareness to manage the effects of future climate variability and change. Technical and financial resources available at the local level are not mobilized or organized around the issues of climate change adaptation by municipality leaders.

The Government of Niger requests the LDCF to finance the additional costs of enhancing the resilience of rural communities in one of the most vulnerable regions of Niger through up-scaling efficient community-based climate resilient practices and measures within the context of inclusive and local development planning.

The objective of this initiative is to strengthen the responsiveness and adaptive capacity of administrative/technical support services at the municipal level to generate a critical mass of climate resilient communities at a cross-regional level and achieve more climate resilient economies in Maradi. This will be achieved through (i) strengthening the responsiveness and adaptive capacity of administrative and technical support services at the municipality level and (ii) the promotion of resilient practices, technologies and measures at the local level in selected adjacent municipalities. The project will focus at a cross-communal level, taking local communities as main entry points and key drivers of change and promoting territorial development in the context of climate change and associated vulnerabilities.

In order to overcome the identified barriers, close support at the municipality level and capacity building through awareness-raising, training on climate change, its impacts and possible adaptation options, are necessary. Trainings and awareness-raising on opportunities and threats associated with long-term climate change will be provided to municipal council members, departmental and municipal extension service technicians (agriculture, environment, livestock), CBOs and NGOs. These trainings will be conducted in a way to ensure that local and departmental targeted stakeholders have sufficient capacities to further integrate climate risk management into programming, including municipal development plans.

Taking due account of local knowledge, customs and risk reduction strategies, the project will aim to demonstrate how efficient and effective community-based climate resilient strategies and practices, mainly based on farming and livestock breeding, can be up-scaled and adopted by a broadest audience and improve living

conditions in a sustainable manner. The project will promote climate resilient farming and livestock breeding pastoral practices and technologies (e.g. production and use of drought resistant seeds, small-scale irrigation techniques and sustainable management of local water resources, pasture and rangeland management), and resilient income generating activities in the selected seven municipalities. These measures will be implemented through a close collaboration with local authorities and technical partners such as local civil society organizations, farmers' organizations, and research institutions such as INRAN. They will promote the use of improved farming and livestock breeding technologies and practices and disseminate research results across the region. These technical partners will be key vehicles to up-scale and disseminate climate resilient options and best practices widely.

Project partners will technically support income-generating activities, and the project will assist project beneficiaries to access microfinance services adapted to their needs and offered by local financial institutions. In this regard, some linkages with the on-going UNCDF microfinance support project, PADMIF, will be created. Support for business development, processing, storing and commercializing products will also be provided to rural producers, particularly women. Women's groups, who are deemed highly vulnerable to the projected impacts of climate change and variability, will be specifically targeted as main beneficiaries of project activities.

The project will build on lessons learnt and best practices drawn from existing and past initiatives, especially regarding means to increase the impact of and scale up IGAs. It will not only extend the geographical scope of areas and the number of communities supported, but it will also focus on scaling up the activities through focusing on product transformation and sales. During the project development phase, critical barriers were identified and listed in the section above, such as the limited entrepreneurial capacities and limited access to markets and credits. Consequently, the outputs and related activities proposed address these barriers by focusing on building capacities of producers through trainings on selected value chains, with the agro-forestry sector identified as crucial, and on facilitating contacts between producers and existing micro-credit and agricultural input institutions to improve access to credits and inputs which would allow them to develop their activities, rather than attempting to create new ones. The continuous engagement of local authorities and extension services which is central in this project also aims at guaranteeing the sustainability of IGAs by ensuring that quality control is provided to enhance these activities and that structural development and changes take place.

In order to support, promote and drive climate resilient farming and livestock breeding pastoral practices and technologies, agro and hydro-meteorological advice needs to be provided to rural stakeholders. Key local, regional and national capacities and means for observing, collecting and processing climate information will be developed. National capacity to formulate and provide agro and hydro-meteorological advice to support farmers, villagers and communities in decisions affected by weather and climate, will also be developed.

Finally, CBA best practices (including gender differentiated issues) from the implementation and up-scaling of community-based resilient practices and income generating activities will be captured and widely disseminated to support replication (with appropriate adjustments) in other vulnerable areas, landscapes and regions. Cross-community learning on adaptation across Niger will also be promoted.

Introduction to the Implementation Areas

The project will be implemented in the Maradi region. This region, located in the centre-south part of the country straddles the Sahelian and the Sahelo-Saharan zones. It has borders with the Zinder region in the east, the Tahoua region in the west, the Agadez region in the north and the Federal Republic of Nigeria in the south. It covers an area of 41,976 km² and is administratively divided into eight departments (Aguié, Dakoro, Guidan Roudji, Madarounfa, Mayahi, Tessaoua, Bermo and Gazaoua) and 44 municipalities including 7 urban municipalities and 37 rural municipalities (see Figure 2). The climate in this region is semi-arid Sahelian climate characterized by high variability in rainfall that is irregularly distributed over time and the region causing recurrent droughts. Rainfall lasts no more than 4 months, and rains are irregular and poorly distributed in space and time.

The Maradi region is the most populated region in Niger, with a population estimated at 3,117,810 inhabitants in 2011, representing 20% of the total population in Niger. Its population density is estimated at 74.59 inhabitants/km², compared to the national population density of 12.42 inhabitants per km². This population is mostly rural, with 86.3% of inhabitants living in rural areas compared to 13.7% of inhabitants living in urban

areas. Women represent 50.6% of the total population, with an estimated number of 1,577,750 women. Furthermore, this population is quite young (53.9% of the inhabitants are under the age of 15, compared to 52.1% at the national level) and grows faster than at the national rate (3.77% for the Maradi region, compared to 3.3% for the nation).

Based on available national statistics, the Maradi region is considered the poorest region in Niger. In terms of mean income, it is at the lower end of the spectrum across Niger, with an annual per capita mean income in 2007-2008 of USD668 PPP (far from the national average and other regions such as Niamey USD2208 PPP, Agadez USD1715 PPP and Diffa USD1232 PPP). Furthermore, food insecurity and malnutrition have been chronic problems in the region for several years.

With respect to women's status in the Maradi region, it is characterized by low access to education with an especially low level of schooling for young girls, and a low access for women to productive resources. Several constraints and aspects hinder women's autonomy: (i) low decision-making power for women inside households and communities, especially in rural areas; (ii) persistence of certain local traditions and habits which hinder women's emancipation; (iii) low access for women to education and literacy, information, advice and technologies; (iv) household chores that overburden rural women, such as caring for children's education, field work, etc.; and (v) premature marriage of young girls. However, some significant improvements have been observed over recent years which could lead to a reduction of gender inequalities. These include the development of a regional women's associative movement (2,897 women's associations registered with 94,037 members) and the strengthening of women's presence in the regional political system (127 women elected among 713 regional counsellors in 2009).

Drinking water needs were estimated to be covered in 2011 at 63.91%, compared to 64.25% at the national level.

Agriculture, livestock raising, small business activities and handicrafts are the main economic activities in the region, for which the vast majority is practiced in the informal economy.

More than 95% of the population in the region practices agriculture. The region has high potential for agro-pastoral activities illustrated by a vast pasture area of 2,455,693 ha, the existence of pasture corridors and delimited community pasture areas, and good integration of pastoral and crop production activities despite frequent conflicts between farmers and herders. Irrigation potential is estimated at 10,500 ha of irrigated lands, which could be increased to 30,000 ha if important investments are made to collect water (Goulbin Maradi, Goulbin Kaba, and Vallée de la Tarka).

The region includes three main agro-climatic areas influencing agro-pastoral activities (see Figure 1):

- The northern area is considered a pastoral area with animal husbandry as the predominant activity. Livestock was estimated in 2011 at 2,065,460 tropical livestock units, or 17.5% of total national livestock. Pastoral activities are mainly extensive and fodder production is currently underdeveloped and has high potential. In this area, pastoral infrastructure includes 8 transhumance corridors, 64 specific grazing areas, 12 vaccination pens (but only 8 are functional), slaughtering areas, and 34 feed banks and livestock inputs stores. Pasture areas have recently been delineated and marked with the support of some livestock raising support projects in Niger, such as the PASEL (Programme d'Appui au Secteur de l'Elevage) which covers 3 districts in the Maradi region (Madarounfa, Guidan-Roumdji and Dakoro).
- The middle area of the region includes both pastoral and agriculture production activities. The current increase of agriculture production activities has had negative effects on the availability of pasture lands and is leading to a rapid degradation of new farming lands and increasing desertification.
- In the southern area, agricultural systems are increasingly intensive due to land pressure and water availability. Main agricultural production includes cereal (25% of national production) and tiger nuts (souchet in French) production (60% of national production). Additional crop production includes groundnuts, cotton, sesame, tobacco and forest products such as gum arabic and palm trees. Farming in the Maradi region is characterized by low productivity and a fragile natural resource base. It was the epicentre of food crises that followed severe droughts in 2005 and 2010. The farming system in this area is highly reliant on weather conditions because it is located between the 200 and 600 mm isohyets and generally receives between 400 and 600 mm of rainfall per year.

According to the analysis conducted as part of the development of the 2012-2015 Regional Development Plan, the main constraints facing the agriculture and livestock sectors in the region are the following:

- Continuous degradation of farming soils (decrease in fertility, wind and water leading to erosion, and the lack of fallow period due to land overexploitation) combined with a lack of use of chemical and organic fertilizers;
- Lack of productive land due to the high demographic pressure, often leading to social conflicts;
- Lack and poor distribution of rainfall in space and time;
- Recurrent parasitic attacks and low prevention and fighting capacities;
- Low level of development of natural resource potentials (irrigated lands, ponds, etc.);
- Over-grazing due to insufficient pasture lands compared to the number of livestock;
- Growth of plants in pasture lands which cannot be used for feeding animals;
- Lack of pastoral water points;
- Low level of access to equipment and technical support for farmers (lack of trainings, information and awareness raising activities);
- Low prices for some farming products during surplus years;
- Low value-added created for farming by-products;
- Lack of farming product processing, due to the lack of and/or the non-operation of food-processing units;
- Low capacities of farmers' organizations and low level of structuring of livestock and livestock by-products dealers;
- Increase in crime (robbery) in both northern and southern areas, constituting a high constraint to the development of livestock raising activities; and
- Poor dissemination of research results.

The choice of this region, the poorest of Niger, is justified by the paradox that, despite being an old economic capital, Maradi is now home to extremely low human development indicators. The region presents a general socio-economic/environmental situation that results in a high vulnerability to climate change and is identified by the NAPA as one of the most vulnerable regions to climate change in Niger. During the NAPA process, the districts of Dakoro and Bermo in the north of the region were identified as particularly vulnerable, and the implementation of the project will therefore be concentrated in these two districts.

The following criteria have been used to identify the targeted areas and municipalities that will benefit from this new initiative:

- Development of a complementary and additional initiative to on-going adaptation projects in the Region. The first UNDP support LDCF financed project supports the implementation of a set of adaptation activities and climate-resilient measures at the local level in 22 villages within the municipality of Roumbou, Department of Dakoro. Among others, the following measures have been supported: production and dissemination of improved seeds, collection of fodder seeds, mainstreaming of climate change aspects within the PDC and support to climate resilient income generating activities. It is suggested as part of this CBA project to work with communities and villages in the Roumbou Municipality that have not been previously supported during the first UNDP support LDCF financed project project to amplify and disseminate effective adaptation measures and generate a critical mass of people and rural farmers, as well as technicians, with adaptive capacities. It is also suggested to support communities in municipalities surrounding Roumbou, so as to easily spread these effective climate-resilient measures and best practices. The overall aim is to concentrate support in adjoining areas in order to limit the scattered effects of investments and to develop sufficient capacities,

means and competencies of extension services, farmers, women and youth to adapt to climate change at a cross-regional level.

The CARE/ALP initiative supports the implementation of adaptive measures in the three following municipalities: Roubou, Bader Goula and Azagor. This initiative supports similar activities as the first UNDP support LDCF financed project project. It is therefore suggested, following the same approach of additionality as the one followed for the first UNDP support LDCF financed project, to support communities and villages within these 3 municipalities that have not previously been supported by the CARE/ALP project. This will help create a critical mass of technicians and farmers that have the capacities, the means and the competencies to adapt to climate change.

The CAPCR funded under the Climate Investment Fund will be active in the coming years in the Communes of Bader Goula, Birni Lalle, Kanembakatché and Konakra. In these municipalities, CAPCR will support the mainstreaming of climate resilience into their PDCs. It will also provide technical and capacity support for adaptation and climate resilience to rural communities in these four municipalities. The CAPCR has important financial resources. It is therefore suggested to work in tandem with this initiative and target adjoining municipalities to the four targeted ones by this project. This will help increase the geographic scope of the CAPCR in order to contribute to upscale adaptation approaches.

- Importance of farming and livestock breeding activities in local economy. It is suggested to concentrate support in the livestock and the agro-pastoral sectors.
- Support to newly created extension services of the Bermo Department: agriculture; livestock, environment and water.

Based on these criteria, it has been suggested to concentrate project activities in the following seven municipalities. The following map shows where these municipalities are located:

- District of Dakoro: Roubou, Azagor, Korahane, Adjékoria and rural villages of the Dakoro Municipality.
- District of Bermo: Municipalities of Gadabedji and Bermo.

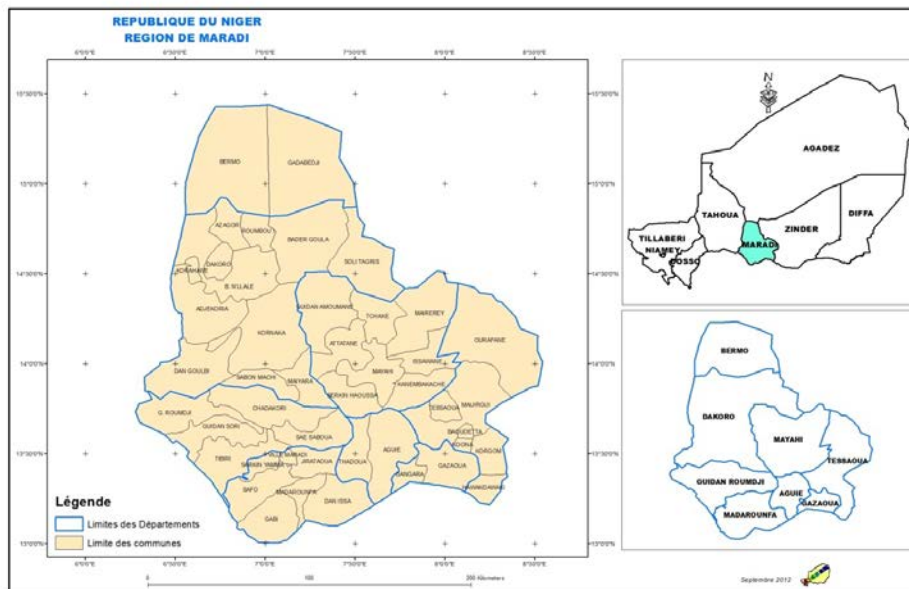


Figure 1 – Location of selected municipalities for the implementation of project activities

The following table provides highlighted socio-economic information on these seven selected municipalities.

Municipalities	Main Characteristics
Pastoral area	
Gadébégi	<p>This municipality covers an area of 3,768.4 km². Its total population was estimated in 2010 at 18,842 inhabitants. The population density is therefore of 5 inhabitants/km².</p> <p>The population is distributed among 16 ethnic groups and administrative villages.</p> <p>The main socio-economic activities are the following: livestock breeding and farming.</p>
Bermo	<p>The municipality of Bermo, located in the pastoral area, covers an area of 8,563 km². Its population was estimated in 2010 at 25,689 inhabitants. This population includes Touareg, Haoussa and Peulh, distributed among 313 ethnic groups and 12 administrative villages. The population density is quite low: 3 inhabitants/km².</p> <p>98% of the population practices exclusively livestock raising and pastoralism.</p>
Agro-pastoral Area	
Roumbou	<p>Estimated at 9,820 inhabitants in 2010, the population in the municipality of Roumbou includes Haoussa, Touareg and Peulh. It is distributed among 22 administrative villages. The municipality covers an areas of 409.16 km² with a population density of 24 inhabitants/ km².</p> <p>Agriculture and livestock breeding are the main socio-economic activities in this municipality.</p>
Azagor	<p>The municipality of Azagor covers an area of 440.5 km². Its population was estimated in 2010 at 14,125 inhabitants and includes Touareg, Haoussa, Peulh and Béribéri. It is distributed in 55 villages. The population density is 32 inhabitants/ km².</p> <p>The main socio-economic activities are livestock breeding, agriculture, handicraft and small business.</p>
Korahane	<p>The municipality of Korahane covers an area of 1,561 km². Its population was estimated in 2010 at 10,927 inhabitants, with a population density of 7 inhabitants/ km². The population includes Haoussa, Peulh and Touareg distributed among 40 villages.</p> <p>The main socio-economic activities are agriculture, livestock breeding and handicraft.</p>
Adjékoria	<p>The municipality of Adjékoria covers an area of 15,678 km². Its population is estimated at 41,287 inhabitants. It includes Haoussa, Touareg and Peulh and is distributed among 84 villages.</p> <p>The main socio-economic activities are agriculture and livestock breeding.</p> <p>Farming lands are overexploited in this municipality due to high population density. Consequently fallow periods are not practiced. Livestock breeding suffers from a lack of feeding for animals.</p>

Municipalities	Main Characteristics
Dakoro	The CBA project will target the rural parts of this municipality which have the same characteristics of adjacent municipalities and where the main socio-economic activities are agriculture, livestock breeding, handicrafts, small business and small income generating activities.

Project Outputs/Activities

Component 1: Municipal authorities, technical services, and targeted communities are technically strengthened to promote climate resilient local development

For a climate resilient local development in the Maradi region and the seven targeted municipalities, climate change risks must be integrated in municipal development planning processes. This will allow the PDCs of these municipalities to plan for strategies and initiatives that will increase the resilience of the agro-pastoral and income generating activities and the adaptive capacities of targeted rural communities.

Without this intervention, capacity will remain inadequate, and climate change adaptation will not be integrated into PDCs of all targeted municipalities, local development processes and rural economies. Support for mainstreaming climate change within PDCs and investments at the local level will be provided. Vulnerability assessments specific to each supported community will be carried out and community adaptation plans will be developed. These plans will be incorporated in the revision of the PDCs and will be based on the Integrating Climate Change Dimensions (IDCC) guidelines developed by CNEDD.

Raising climate change awareness and strengthening communal leaders' will achieve this and extension services' capacities on climate risk monitoring. This includes how to integrate climate change in PDCs, adaptation and the benefits of resilient activities and empowering communities in the seven targeted municipalities so they participate in the integration process of climate change aspects into development planning. Infrastructure and logistics of the Departments of Livestock and of Environment in Bermo will be developed. Technical support will also be given to local, departmental and regional Land Commissions as well as the Chamber of Agriculture. Communal decision makers and technical extension workers at the municipality level will be provided with the capacities to understand the opportunities and threats associated with long-term climate change and integrate this new learning into their programming.

Without this intervention, climate information at the communal and local level will remain unavailable and agro- and hydro-meteorological advice to rural communities and farmers non-existent. Support will be provided for the establishment of sustainable and effective communication systems between the National Directorate for Meteorology, key extension services, local decision-makers and rural communities to enable these key stakeholders to access and use relevant climate information and hydro-meteorological advisories and information on climate change impacts. The SCAPRUs will be created (or revitalized if already existing) in supported communities. Automatic rain gauge stations that will systematically supply rainfall data to DMN will be installed, and technical and infrastructure capacities of data collectors and analysts will be strengthened at the local, departmental and regional level. Close linkages will also be built with meteorological institutions, located in Niamey, including ACMAD, AGHRYMET and EAMAC. Their expertise will be useful for developing a climate advice communication system, and they will also provide support in gathering and analyzing weather data.

In the baseline, current cross-cutting efforts to identify, codify and disseminate CBA best practices and lessons learned are limited and insufficient, and knowledge-sharing among vulnerable communities on how to address a changing climate is poor. Only a limited number of organized efforts to ensure such cross-community learning are currently happening across Niger's vulnerable communities. Support will be provided to capture and widely share/disseminate CBA best practices (including gender issues). A cross-community learning process on adaptation across the Maradi Region and Niger will be promoted to support replication in other vulnerable communities.

Outputs

Four major outputs will contribute to attaining this outcome. They consist of:

Output 1.1: Members and technical workers of regional and municipal councils, extension services (agriculture, environment and water and livestock) and NGOs and CBOs active in the seven targeted municipalities have the tools for mainstreaming climate change into development plans (PLD, SRAT, PNAT) and into the management and planning of socio-economic activities.

Activity 1.1.1: Train 150 technical workers and members of municipal and regional councils in the Maradi region in climate change planning.

Within the AAP Project framework, CNEDD developed a guideline for IDCC in community planning in 2012. CARE's ALP Programme also facilitated a participatory process for planning community adaptation allowing for the creation of Action Plans for Community Adaptation (PAAC). Municipal and regional council members and technical workers will be trained in using these tools. Reaching a large audience will contribute to creating a critical mass of municipal and regional leaders that have the skills necessary to lead such an exercise. Experience sharing could also be performed with other mayors, which have already benefited from similar trainings. Specific activities include:

- Identifying needs and developing training modules;
- Organising 3 training sessions, assuring the participation of women;
- Monitoring and evaluation of trainings to assure their usefulness.

Two national consultants with expertise in local planning and climate change will be recruited to facilitate the development of tools and to organize training workshops. They will help develop monitoring and evaluation tools in partnership with local agents in charge of planning within targeted municipalities and the region.

Activity 1.1.2: Train 45 extension service workers (agriculture, environment and water, and livestock) in mainstreaming climate change into management and planning of socio-economic activities.

This will include organising training sessions for the 6 agents at the Ministry of Agriculture, 6 agents at the Ministry of Water Works, 19 agents at the Ministry of Livestock and 14 agents at the Ministry of the Environment based in the departments of Dakoro and Bermo on the following topics: (i) information and awareness-building on climate risks; (ii) tools for evaluating the vulnerability of socio-economic sectors; (iii) management of climate risks and identification of adaptation strategies in each respective intervention sector (agriculture, etc.). Skills related to using and implementing management tools for climate risks (maps, climate information, warning systems, etc.) will be improved to bolster management and planning of socio-economic activities in the face of risks posed by climate change. Specific activities include:

- Identifying needs and preparing training tools;
- Developing a training program for using climate risk management tools in the planning and management of socio-economic activities at the local and regional scale;
- Organising at least four themed trainings while assuring participation of women;
- Monitoring and evaluation of trainings to ensure their usefulness in management and planning of socio-economic activities.

National consultants will develop tools and assist beneficiaries in applying information received from trainings.

Activity 1.1.3: Train 60 members from CBOs and NGOs in targeted municipalities on risks linked to climate change and options for adaptation.

In 2006, Niger, with support from technical and financial partners including UNDP and the GEF, developed its NAPA through a participatory process. The principal extreme climate events in Niger are: droughts, floods, sand and/or dust storms, extreme temperatures and strong winds. The process also allowed for the identification of multiple adaptation options (14 in total) based on the different zones of the country. Local actors will receive general information on essential meteorological parameters (temperature, rainfall, wind, evaporation, changes in the start and finish of the rainy season, etc.) and concepts on climate trends in the project's intervention areas.

They will also receive assistance sufficient to evaluate the relevance and effectiveness of current adaptation strategies and measures. Specific activities include:

- Identifying actors and needs for training and preparing training tools;
- Developing training programs on climate risks and adaptation measures/options for targeted communities;
- Organising at least two thematic trainings while assuring the participation of women;
- Monitoring and evaluation of trainings to identify adaptation options and measures envisioned by local stakeholders.

National consultants and/or extension services will develop training programs and assist beneficiaries in using the trainings.

Output 1.2: A sustainable and effective communication system is established to provide municipal council members, extension services and community organizations (CBOs and NGOs) with relevant climate information and agro and hydro-meteorological advisories, and other climate risk management tools

An effective system to collect, analyze and diffuse climate information to rural communities, extension services and local decision makers will be set up. This includes strengthening the entire information chain from producing, distributing and analyzing meteorological data to broadcasting recommendations and meteorological bulletins. Such a system will involve the DMN, the Regional Direction of Agriculture and the rural radio Muryan Dakoro. Equipment and means to implement this system will be provided.

Diffusion of meteorological and agro-meteorological information is done through the DMN, which has signed a Memorandum of Understanding with the SE/CNEDD in 2010. With financing from the GEF, 225 SPIEA direct-read rain gauges (20 are in Roubou), a server and computer materials were bought for the DMN to strengthen the methods of collecting and managing data in the intervention communities of the first LDCF project in 2011. Equipment and means will be provided to assure a regular diffusion of climate and agro-meteorological information. Moreover, community SCAPRUs will be improved with information on flood risks. International partners based in Niger such as ACMAD, AGRHYMET and EAMAC will be involved in the collection and analysis of climate data and in the setting-up of this climate advice communication system. To do so, indicative activities are:

Activity 1.2.1: Equip the seven municipalities with automatic meteorological stations and rain gauges (about 500 SPIEA) to strengthen data collection and analysis in the intervention areas.

About seven automatic meteorological stations will be installed to collect rainfall, temperature, hygrometry and wind data. Rain gauges will also be distributed to farmers (of which 50 percent will be women) as part of the data gathering plan. Trainings on how to collect, distribute and interpret rainfall data in local languages will be held for farmers who collect the rain gauge readings in the countryside. Rain gauge stations will provide meteorological data for analysis by the DMN to produce agro-hydro-meteorological bulletins adapted to the needs of end-users, farmers and local decision-makers. These stations will be managed by the extension services of the DMN based in Maradi and in Dakoro. Services will benefit from logistical support to adequately manage and maintain the stations. These activities will be created through the following stages:

- Mapping of weather observation infrastructures in the region and municipalities and identification of additional equipment needs for achieving optimal coverage;
- Purchase and installation of equipment (automatic and rain gauge stations);
- Organise a training session on collection and analysis of data for DMN staff; and
- Organise trainings on collection, diffusion and interpretation of rainfall data in local languages in each of the municipalities for observer farmers.

Activity 1.2.2: Distribute agro-meteorological recommendations to farmers and climate information to local decision-makers.

Extension Services of the DMN in Maradi and Dakoro will assure data distribution, with support from the Regional Directorate of Agriculture and the rural radio Muryan Dakoro. MoUs with the DMN and the Regional Directorate of Agriculture already exist in this domain. These conventions detail explicitly the roles and

responsibilities of each institution in the collection, storage and analysis of data and in the creation of agro-hydro-meteorological recommendations. The system needs to be updated to incorporate the specific needs of the project. Moreover, the rural radio Muryan Dakoro already broadcasts agro-hydro-meteorological bulletins as well as other relevant climate information (including potential adaptation options) from the national level to farmers. The radio will benefit from financial support from Canada to improve equipment (eg. transmitters, receptors, solar kits, etc.). The radio station will continue supporting the project in the Dakoro area. For Bermo, another rural radio station will be identified for support from the project in the form of equipment and training to cover the two project municipalities. Specific activities will include:

- Define and identify the needs of local actors for agro-hydro-meteorological recommendations and climate information;
- Update partnership protocols with Extension Services from the departments of Agriculture and Meteorology;
- Develop and produce climate and agro-meteorological information through the DMN and provide this information to broadcasters;
- Equip and train the rural radio station of Bermo and sign a contract for delivering relevant information;
- Broadcast information through the DMN channels, Agriculture Department and rural radio in local languages; and
- Evaluate and monitor experiences for scaling up.

Activity 1.2.3: Disseminate information on flood risks via SCAPRUs.

The Directorate of Water Resources at the University of Maradi will create a map of flood and flash flood zones and produce community level plans for flood risks management. Principle activities will include:

- Collect and analyse reports from the Inter-ministerial Committee on Flood Watch (*Comité Interministériel de Veille des Inondations*) within the Ministry of Land Administration and Local Authorities (*Ministère de l'Administration Territoriale et des Collectivités Locales*) and from the National Civil Protection (*Protection Civile Nationale*) – this information will be used as a point of reference for floods;
- Digitally compile (in spreadsheet form) flood statistics and reports following the model developed by the Directorate of Water Resources;
- Locate flood zones in targeted municipalities, characterize and geo-reference the types of flooding;
- Create at least three community plans for flood risks management; and
- Implement a dynamic flood prevention system through the mayoral offices/SCAPRU.

This activity will be carried out under the partnership with the DMN or AGHRYMET, who will contribute necessary expertise.

Output 1.3: Municipal development plans and annual budgets for the 6 prioritized vulnerable municipalities will be reviewed and updated to integrate effective climate risk management to support more climate-smart investments.

Based on skills acquired through trainings conducted as part of Output 1.1, climate information collected as part of Output 1.2 and the IDCC guidelines developed by CNEDD, the PDC and annual budgets for six of the seven targeted municipalities will be reviewed and updated to include risks and opportunities associated with long-term climate change and to make community investments more resilient. The PDC of Roubou will not be reviewed as it has already been updated through the first LDCF project. Climate forecasts and adaptation strategies will be gradually integrated in the decision and planning processes. Revision of the PDCs will follow the seven defined phases from IDCC guidelines:

Activity 1.3.1: A preparation phase, consisting of: (i) coordination of decision makers and the service provider team selected to revisit the PDC; and (ii) sharing tools for collecting data on climate change with the committee in charge of integrating climate change identified at the municipal level.

Activity 1.3.2: A diagnostic and analysis phase that will identify signs of climate change, real or potential, and their impacts as well as different adaptation pathways. The different stages will be: (i) cartographic time series; (ii) collection and analysis of climate data; and (iii) collection and analysis of data on

community perceptions of potential adaptation solutions. Vulnerability analysis for each municipality will be conducted and community adaptation plans will be developed based on the model of PAACs developed through the CARE/ALP program; (iv) analysis of climate change impacts on the different domains, sectors and priorities identified within the PDCs; (v) prioritization of adaptation and mitigation options; and (vi) synthesis and validation of analysis and diagnostic results.

Activity 1.3.3: Results from the analysis and diagnostic will be used to plan activities following: (i) creation of priority action plans; and (ii) obtaining consensus between principle actors.

Activity 1.3.4: Development/revision of the PDC by a small team set-up from the PDC steering committee. The document will be developed following national guidelines for PDCs.

Activity 1.3.5: Adoption during which the document developed will be validated following prescribed procedures from the PDC guidelines.

Activity 1.3.6: Quality control phase according to the PDC in which the document adopted by the municipal council is evaluated for adherence to the procedures described in the PDC guidelines.

Activity 1.3.7: Dissemination of the PDC

The project will support the organisation of dissemination workshops with different partners from the Mayor's office to finance identified adaptation actions. UN Volunteers (UNVs) of the project will assist municipalities in creating financially solvent projects.

Implementation of activities will be the responsibility of the Mayors' offices who will be assisted by national experts in local planning, climate change, economy and environment. During the development of the revised PDCs, the University of Maradi will support vulnerability assessment studies and will make available to the Mayors' offices any tools needed for decision-making (maps, data, etc.).

Output 1.4: CBA best practices (including gender differentiated data) are captured and widely shared/disseminated and cross-community learning on adaptation across the Maradi Region and Niger is promoted to support replication in other vulnerable communities

An important part of scaling-up CBA practices and measures and ensuring the sustainability of the project is to capture, analyse and disseminate best practices and lessons learned to enable cross-community learning on adaptation across the Maradi region and Niger, and replication in other vulnerable communities. Therefore, this output is dedicated to compiling and documenting lessons-learned in the process of implementing all the activities and diffusing effective CBA practices. These lessons learned will feed into the overall learning process on adaptation aspects piloted by CNEDD and to which the first LDCF, AAP and CARE/ALP initiatives have already contributed. To do so, activities include:

Activity 1.4.1: Design a communication plan for the project.

The project will create and implement a communication plan based on efficient management of knowledge on climate change and adaptation, organising advertising campaigns and general awareness-building, social mobilisation and conducting training sessions specific to different stakeholders. The three-way combination of awareness-building, information and training will heighten consciousness on the climate, adaptation options and the need to change mentalities to implement the project effectively.

Environmental education will be promoted in schools. Educational information and communication will be publicised through appropriate channels and mediums, especially community radio. Specific activities will include:

- Identify communication needs for targeted groups;
- Create a communication plan based on climate change and adaptation data generated by CNEDD through AAP;
- Prepare materials and distribution plans for communication;
- Plan communication based on project activity progress; and
- Establish a monitoring and evaluation system to track the impact of project communications activities.

National consultants will be recruited to create the communication plan, and the communication expert recruited for the project will put the plan in place.

Activity 1.4.2: Organize exchanges between project sites and between farmers in order to spread project techniques and lessons learned.

This activity includes facilitating exchanges and best-practices sharing between different beneficiaries on technical and farming topics, harvest practices, storage methods and marketing for products produced as part of the project. Implementation will include the following stages:

- Identify sites to visit;
- Organise local exchange trips and community meetings to share lessons learned across the country;
- Organise forums to share best-practices and lessons learned and to facilitate replication in other municipalities; and
- Use of communication tools relevant to the various stakeholders' groups (eg. trade shows, exhibitions in weekly markets, etc.).

Exchange trips organised for this activity will be based on demonstrations followed by discussion and debates. The approach should facilitate exchange between farmers where they analyse opportunities and challenges on various topics. The Project Management Team, municipalities and relevant Extension Services will help with technical organization of and logistics for the trips.

Activity 1.4.3: Disseminate lessons learned and project experiences at the national and international scales.

Promoting and disseminating lessons learned and best practices is a key part to relevance, effectiveness and impact of adaptation activities and local development on the one hand and to contributing to implement the UNFCCC on the other.

It will be important to identify pathways for communicating relevant project outcomes in a way that is sustainable so that other communities can adopt and take over activities.

This activity will be carried out through the following stages:

- Conduct a study on adaptation best practices and lessons learned based on project activities;
- Prepare information bulletins, guideline sheets, diverse communication products, etc.;
- Translate communication products into local languages;
- Develop an information package translated into appropriate language formats for distribution through community radio or television chains;
- Disseminate products in intervention zones using local and national media; and
- Contribute regularly to the site www.cnedd.ne, Adaptation Learning Mechanism (ALM) and WikiAdapt.

This activity will be carried out by placing the project communications expert in touch with communication consultants and service providers, graphic designers, media producers and sources of reproduction for selected work

Component 2: Scaling-up and implementation of measures to build rural communities' adaptive capacities.

Addressing the high vulnerability of rural households and communities in the Maradi region to ecological, economic and climate factors requires a concerted and concentrated approach to support the implementation and adoption of climate resilient livelihoods, investments and income-generating activities.

Without this intervention, resilient practices developed through support from other initiatives will remain limited to pilot projects without adoption by a wider audience. This intervention will support the diffusion and adaptation to local context of these resilient measures and the dissemination of traditional practices in the seven intervention municipalities. These measures will increase adaptive capacity to climate change and lead to sustainable socio-economic development across municipalities and the region. Rural farmers, particularly women, will be engaged in more CR-IGAs. This initiative will take stock of best practices and lessons learned from the implemented first LDCF and ALP/Care projects.

In the absence of the proposed initiative, farming production and livestock raising capacities in the targeted municipalities will remain low due to the fragility of the natural resource base, the weak use and low availability of farm inputs, high dependence on rainfall and under-development of fodder production. Conflicts between farmers and herders will be exacerbated due to increased competition for access to decreasingly available land and water. The proposed initiative will contribute to strengthening agriculture production capacity in the targeted seven vulnerable municipalities. It will support the production and diffusion of seeds for millet, sorghum, black eyed peas, peanuts and tiger nuts that are drought-resistant and better adapted to erratic rainfall thus helping protect yields.

Support for the development, supply and management of farming inputs shops will be provided to increase the availability and use of agricultural and husbandry/livestock inputs (fertilizers, pesticides, equipment, etc.).

Small-scale irrigation techniques will be promoted and spread throughout the three municipalities with the strongest potential for irrigation. Technical support for sustainable water management will be provided. SPR/SWC measures will also be promoted to increase the availability and the quality of productive lands.

In the absence of such a project, local capacity to adopt resilient practices and techniques, develop local businesses, access finance and transform, store and commercialize products in the face of climate change will remain weak. Technical support will be provided to rural farmers, including women, in the seven prioritized vulnerable municipalities to develop small businesses, facilitate access to financing, and process, store and sell products. Access to micro-finance will be facilitated to finance, among other things, implementation of resilient farming practices. The expertise from UNCDF in microfinance, especially through the project PADMIF, will be drawn on to help project beneficiaries access existing financial services in the region.

National and international research partners (such as INRAN and ICRISAT), regional and departmental Extension Services from the Ministries in charge of Agriculture, Livestock and Environment/Water, national and local NGOs (such as AREN, AGIR, ALD, CDR, etc.) and farmer organisations will be closely involved in the implementation of CR-IGAs and adaptation techniques and measures.

Overall, this approach will involve larger or more sophisticated investments in climate resilient technologies and practices and in income-generating activities that are resilient to more frequent and intense climate threats. These on-site investments will not only demonstrate appropriate climate risk management approaches, they will also bring direct relief to the most vulnerable communities in the Maradi Region. At the community level, a participatory approach will be adopted, based on an in-depth analysis and understanding of each community's vulnerabilities and adaptation needs.

Outputs

Six outputs will contribute to attaining this outcome. They consist of:

Output 2.1: At least 3,300 heads of households - rural producers from the 7 prioritized municipalities, of which 80% will be women, are engaged in climate-resilient income-generating activities (CR-IGAs)

At least 3,300 rural producers, including at least 2,000 women, will benefit from technical and financial assistance to implement resilient CR-IGAs.

It is clear from the assessment conducted as part of the PPG that site-specific situations vary greatly in terms of biophysical circumstances, social and institutional set-up and local development visions and theories of change. It is critical that the site-specific interventions continue to be developed in a participatory manner with local farmers. Specific CR-IGAs and promising sectors will be prioritized and selected based on local context. The support will also take stock of previous experience in implementing CR-IGAs in Roubou and Bader Goula supported by the first LDCF and CARE/ALP projects. Consultative work with experts that have direct experience with these two initiatives will be conducted, so as to ensure synergies. Extension Services will also play a key role in ensuring supervision of beneficiaries, monitoring and evaluation of CR-IGA implementation and the replication of good practices and lessons learned from the implementation of these two initiatives. The following activities are planned:

Activity 2.1.1: Analyse the cost-effectiveness of proposed CR-IGAs and economically viable channels for resilience as well as those that are most promising in terms of market outlets.

IGAs that were mentioned during the PPG field missions, particularly by women (with the exception of women in the Bermo municipality), include: small businesses, small-scale catering, raising livestock, small-scale livestock and processing agro-forestry and pastoral products. Women represent a particular interest in transforming products, specifically for the following: extracting peanut oil; making cheese; utilising local forest plants that can be used for multiple purposes such as diversifying diets (leaves, fruits and juice); health; feeding livestock and creating art objects and utensils. Work done by men centres on: wood work (construction, making tool handles, mortar and pestles, traditional tools, and shoe repair).

The experiences from LDCF illustrated the limitation of certain CR-IGAs, especially in terms of sustainability and impacts on household revenue. During the inception phase of this CBA project, a meticulous analysis of CR-IGAs will be carried out to evaluate their economic and social viability and to identify support measures to be taken into consideration during implementation.

Experts in agriculture and socio-economics will be recruited to identify the challenges associated to the implementation of CR-IGAs as well as processing and selling products created from selected CR-IGAs including: access to markets and quality standards for the products; evaluation chains to potential clients including networks of organisations; and analysis of the main limitations to selling these products and proposed solutions. These studies will lead to a full characterisation of CR-IGAs and to the identification of a plan to strengthen farmer capacities.

Activity 2.1.2: Support the transformation of agro-forestry and pastoral products and development of local forest products.

Women form one of the most vulnerable groups to the effects of climate change identified in Niger in general and especially in agro-pastoral areas. Support for CR-IGAs and especially processing agro-forestry and pastoral products will contribute to increasing women's revenues and improving their ability to withstand production dips. Support from the GEF will contribute to reinforcing women's capacities in the livelihood and production activities mentioned above. Principle activities will include:

- Identifying different sites and products;
- Set-up of management committees;
- Training beneficiaries in areas pertinent to the project;
- Making necessary materials and equipment available to beneficiaries; and
- Monitoring and evaluation of activities.

To carry out these activities, it will be necessary to contract service providers. Extension Services will oversee activities in their respective domains.

Activity 2.1.3: Support for small-scale livestock rearing and husbandry.

The activity, which falls under the goal of improving quality of life, focuses specifically on vulnerable women in hopes of making them more autonomous, active and able to thus contribute to improving quality of life for society in their specific communities.

Animals raised in agro-pastoral zones are, in order of importance, small grazers, such as sheep and goats, and large grazers, such as cattle. Additionally there are horses, mules and camels. Encouraging husbandry that is close to the house, practiced mostly by women and is for small animals and poultry should support this activity. There is proven experience with this practice in the project area drawn from interventions for other NGO projects (SARL, first UNDP support LDCF financed project project, CARE Niger, AREN, ADL, ALAD, EIP Niger, etc.) and which should be used as a basis for the project supported interventions. Implementing this activity will include the following phases:

- Information and awareness building of beneficiaries;
- Acquisition and distribution of livestock for raising;
- Set-up of management committees;
- Organisation and training of women's groups in techniques for raising sheep; and

- Monitoring and evaluation of implementation.

These activities will be implemented through a partnership of different stakeholders that includes local NGOs, different Management Committees established for the activity who will supervise animals and beneficiaries, and Extensions Services for livestock that will conduct monitoring and evaluation of activities.

Activity 2.1.4: Support to artisanal and commerce activities

Artisanal activities consist of woodwork, basket weaving and shoe making that use agro-forestry and pastoral products as raw materials. These activities aim to create employment and increase revenue.

Small-scale commerce includes selling cereals, condiments and manufactured products.

Activities related to artisanal work are done by men and include: (i) using wood in construction (ii) making tool handles, mortars and pestles; (iii) making traditional tools and making shoes.

Women tend to work in tannery to make art objects (such as leather handbags, wallets, cushions, etc.).

To carry out artisanal and commerce activities, it will be necessary to:

- Organise training sessions to share experience and techniques; and
- Supply materials and/or financing for funds.

Output 2.2: Farmers possess skills in entrepreneurship and promising sectors management to strengthen the profitability and sustainability of resilience activities.

The capacity of beneficiaries to implement CR-IGAs as well as to implement the promising sectors identified as part of Output 2.1 will be developed. In particular, skills related to entrepreneurship, marketing of products, managing value chains, and accessing financing and credit will be strengthened. To this end, the following activities are planned:

Activity 2.2.1: Organise training sessions on the different aspects of selected value chains.

Resources from the GEF will serve to strengthen management skills of producers engaged in CR-IGA by organising diverse workshops: transformation and treatment, quality control, commercial management, access to financial credit and applying for financing, and warranty etc. Professionals in each sector will carry out workshops, and a partnership will be established with the private sector to mentor women after the workshop. Principle activities will include:

- Identifying needs and creating training materials and content;
- Organisation of four workshops for producers and groups of women/young people;
- Impact evaluation of workshops on CR-IGAs; and
- Sharing and promoting experiences.

Activity 2.2.2: Facilitate access to credit for 3,300 producers for chosen supply chains.

Collaboration with the project PADMIF will be established to provide producers with access to financial products and create opportunities for contact between producers, producer organizations and micro-credit suppliers (such as KOKARI and MMD in Dakoro). UNVs will help different groups of producers and women to submit applications based on workshops carried out under Activity 2.2.1. A partnership with KOKARI and MMD in Dakora will be developed to guide organisations in the operation of rural finance systems. Principle activities will include:

- Identifying needs;
- Establishment of partnerships with micro-finance institutions;
- Development of micro-finance applications;
- Awarding of financing;
- Monitoring and evaluation;
- Sharing experiences.

Output 2.3: An operational chain from production and storage to distribution of early maturing seed varieties resistant to drought for millet, sorghum, peanut, cowpeas, and tiger nuts is established.

Improved seeds for millet, sorghum and cowpeas have been developed and disseminated as part of the first LDCF supported initiative and CARE/ALP. Twelve seed multipliers were trained and installed. Building on the lessons learned and best practices from this first experience, the number and capacities of seed multipliers will be improved. An operational supply chain for the production and the diffusion of drought resistant and short cycle seeds for the main crops cultivated in the region will be established. These will include millet, sorghum, tiger nuts, peanut and cowpea. Activities will include the following:

Activity 2.3.1: Develop and test new seeds in rural areas for sesame and peanut through the regional centre for research, INRAN.

The IRAN research centre based in Maradi will be in charge of developing and testing new seed varieties for sesame and peanut not already researched under the first UNDP support LDCF financed project project or CARE/ALP.

INRAN, in close collaboration with extension services, will identify and contract seed producers in the seven municipalities. INRAN and Extension Service technicians will technically support these producers. Participative action research will be conducted in Years 1 and 2 with seed producers and support from agricultural Extension Services. Framework agreements between INRAN, selected farmers and Extension Services will be signed. Primary activities will include:

- Needs assessment and development of a protocol with INRAN;
- Establish testing fields of 10 ha per municipality;
- Train producers in multiplication processes;
- Monitoring and evaluation of productivity and performance of new varieties; and
- Certification by INRAN.

Activity 2.3.2: Train 70 seed multipliers, of which 25% of women, in the production of improved seeds of millet, sorghum and tiger nuts

This activity has already been supported by the first UNDP support LDCF financed project project in Roubou municipality where 10 seed multipliers are already active.

The GEF resources will be used to strengthen capacities of existent seed multipliers, and to increase the number of seed multipliers and train them. Their capacities will be built through trainings on associative characteristics, farming techniques and crop pest management. Main activities will include:

- Awareness raising of seed multipliers;
- Training on management of associations;
- Training on seed multiplication techniques;
- Training on methods for identifying and fighting against crop pests.

The service providers (NGOs, consultants) will conduct the two first training and the others by extension services.

Activity 2.3.3: Distribution of improved seeds for millet, sorghum, cowpea, peanut, etc. to 800 farmers, of which 25% will be women.

The strategy for scaling up improved seed dissemination will be based on providing every year before the rainy season improved seeds to new farmers in villages not yet targeted. Yearly, about 400 farmers will be reached by this activity. Only seed producers will be supported by agriculture extension services and VNU under the supervision of INRAN in Maradi. Awareness-building programs in local languages on climate change and the use of drought-resistant seeds will be conducted through local radios. Activities within this task will include:

- Organising awareness-building sessions for farmers in the region on how to use improved seeds and the benefits brought about by this use;
- Granting seeds to farmers, of which 25 % will be women; and

- Supervision and monitoring.

Output 2.4: The distribution system for agricultural and livestock inputs is strengthened in the 7 intervention municipalities

One of the main causes of vulnerability stems from the weak availability of farming inputs (fertilizer both organic and chemical, pesticides and equipment) and livestock inputs (medicine, vaccinations, mineral supplements, wheat bran and cotton grains) at the local level. Support will be given to strengthen the input distribution system implemented and managed by CAIMA at the local level, including technical support for local management committees and provision of agricultural and husbandry inputs. Planned activities will include:

Activity 2.4.1: Facilitate provision of agriculture inputs to farmers.

Needs and priorities in the seven targeted municipalities will be analysed and identified according to: (i) management of the input distribution system; (ii) availability of farming inputs; and (iii) use of inputs by farmers. The project will develop a partnership with CAIMA that commercialises subsidised products. The number and accessibility of sales points for farming inputs needs to be increased. The project will make an initial stock of organic and mineral fertilizer, pesticides and equipment available to farmers. Management committees of inputs stores will be created and trained in management aspects with at least five women participants. Specific trainings will be organised for farmers on how to use fertilizers and pesticides. Finally, the Directorate for plant protection (*Direction de la Protection des Végétaux*) will carry out the follow-up of inputs stores and will assure that pesticide products fall within international standards for storage and security.

Activity 2.4.2: Facilitate supply of livestock inputs.

Groups of livestock raisers with support from AREN will accomplish this activity through a MoU with the project. Improving livestock nutrition will include:

- Identification of needs for livestock raisers and channels for marketing inputs;
- Establishment of inputs stores adapted to bran storage and provision of an initial bran stock;
- Creation of management committees;
- Awareness-building/training of livestock raisers on the importance of using inputs like linseed oil, cotton grains and flour, on making use of secondary products and on using urea in animal feed; and
- Monitoring and evaluation of impacts.

Output 2.5: Soil and Water Conservation/Soil Protection and Restoration techniques are diffused throughout the seven intervention municipalities.

SWC/SPR measures aim to achieve several goals: (i) improve water management; (ii) increase the productivity of cropland and rangeland; and (iii) ensure sustainable management at the environmental, social and economic level.

The following activities are planned:

Activity 2.5.1: Rehabilitate 200 ha of degraded agricultural, pastoral and forest land.

Establish *half-moons* techniques on 200 ha of agricultural, rangeland or forest lands that are degraded. *Half-moons* are constructions of compacted earth or stones in the form of a semi-circle that have perpendicular openings that correspond to the direction of water flow.

The project will also promote the creation of farming and agro-pastoral embankments on 200 ha (six to eight embankments per hectare). The technique includes building a rectangular mound from compact earth, stones or a mix of the two.

Specific activities will include:

- Information/awareness building for local people on SWC and SPR themes;
- Identification of degraded sites with stakeholders;
- Preparation of workshops on how to build and maintain *half-moons* and embankments;
- Set-up of local community areas management committees and identification of farmers that will implement demonstration works;

- Training/demonstration to committee members and farmers in pilot projects;
- Construction of works at the rate of 333 *half-moons*/ha and 6-8 embankments/ha;
- Planting of species such as *Senegal Acacia* and *Radiana Acacia* at the rate of three plants per *half-moon* of agro-pastoral land and 16 per embankment as well as protection of these sites by village committees. *Half-moons* in agricultural fields will be planted with cereals;
- Monitoring of sites by all stakeholders; and
- Evaluation of activities.

Workers from the Department of the Environment and/or from local NGOs will be solicited for technical assistance (awareness-building, identification of sites, training and construction of infrastructure works) and will oversee the targeted communities.

Activity 2.5.2: Stabilize 100 ha of dunes for agro-pastoral production and regeneration

This includes stabilising the dunes by installing a plant barrier (*Leptadenia pyrotechnica*, *Euphorbia balsamifera*) or millet stems. This method of fixing dunes will be reinforced by planting plants such as *Cenchrus biflorus* and plantations of woody species adapted to the region such as *Acacia radiana* et *Acacia senegal*.

Specific activities will include:

- Awareness-building for local people on the consequences of sand dunes' progression and techniques for preventing it;
- Identifying with stakeholders of dunes and sites for taking/making available local materials like leptadenia, euphorbia, millet stem;
- Preparing training materials on constructing and maintaining fences;
- Set-up of local committees for the management of stabilized dunes;
- Training for committees' members on dunes stabilization techniques;
- Constructing fences perpendicular to the direction of prevailing winds;
- Seeding grass varieties (*Cenchrus biflorus*...), woody species at a rate of 400 plants/ha and protecting sites by local management committees;
- Evaluating activities; and
- Monitoring sites by all stakeholders.

Local workers from the Department of the Environment and/or local NGOs will be solicited for technical assistance (awareness-building, identification of sites, trainings, construction of works...) and guiding targeted communities.

Activity 2.5.3: Establish 500 km of firewall to protect grazing lands in pasture areas during the dry season.

The project area encompasses important potential pasture land, in particular in the Bermo department where livestock rearing is the principle livelihood activity. Each year important amounts of grazing lands are destroyed by wildfires.

Opening 500 km of firewalls with a width of 20m to protect pastureland from these fires should be done.

Specific activities will include:

- Awareness-raising for local people about the causes, consequences and prevention of bush fires;
- Identification of priority pasture land with local communities;
- Preparation of training materials on opening of firewall bands and use of straw coming from those bands;
- Establishing village management committees and oversight of firefighters;
- Training/demonstrating to committee members and firefighters about techniques for opening firewall zones that should be parallel, 20m wide and constructed perpendicular to the direction of prevailing winds;
- Tillage tools for committees/firefighters;
- Opening of firewall bands perpendicular to the prevailing winds;

- Making use of the straw produced in the firewall bands (treatment with salt/urea);
- Evaluation of activities; and
- Monitoring of sites by stakeholders.

Agents from the Department of the Environment and Livestock and/or local NGOs will be solicited for technical assistance (awareness-building, identification of sites, training, opening of bands, treatment of straw, etc.) and guiding targeted communities.

Activity 2.5.4: Implement agro-forestry practices to protect crops and regenerate woody plant species.

The activity will include installing 500 km of windbreaks and live hedges around villages at a rate of 100 plants/km and secondly promoting the natural regeneration of 1,000 ha that consists of protecting and maintaining woody species that grow on farmland.

Specific activities will include:

- Information/awareness-building of local people on the advantages of wind blocks and assisted natural regeneration;
- Identification of sites for wind blocks;
- Establishing village committees to manage wind blocks and survey local pilot projects for assisted natural regeneration;
- Recruiting and training village horticulturalists to manage wind blocks and live hedges;
- Produce forest plants chosen by the communities;
- Train local people in pilot programs about assisted natural regeneration techniques;
- Set out, dig and plant wind blocks and protect sites;
- Evaluate activities; and
- Monitor sites by stakeholders.

Workers from the Department of the Environment and/or local NGOs will be solicited for technical assistance and guidance in targeted communities.

Activity 2.5.5: Arrange and treat 1 linear kilometer of Koris.

It is an adaptation technique that consists of protecting waterways (koris) against blockage and/or siltation by planting trees or installing small infrastructures.

Specific activities will include:

- Identifying koris that are threatening agricultural and pastoral zones, community infrastructures, villages/camps, etc.;
- Elaborating ToRs for preliminary technical studies;
- Call for proposals for local offices to conduct the studies;
- Create technical evaluations;
- Carry out work and treatments of koris; and
- Evaluate impacts of the works carried out.

Service providers and consultants will be solicited to assist in guiding targeted communities. Extension Services from the Department of Rural Engineering will assure technical supervision of the activity.

Output 2.6: Develop 250 ha of farmland with small-scale irrigation systems and disseminate small scale irrigation and sustainable water management techniques to 1,500 rural farmers, of which 50 percent will be women, in the three targeted municipalities.

Activity 2.6.1: Expand irrigated zones in the three municipalities of the Dakoro department.

Techniques for small-scale irrigation will be promoted in the three municipalities of the Dakoro department that show potential for increased irrigation (Adjekoria, Korahane and the rural areas in the urban municipality of Dakoro), to improve productivity of small garden farming and food crops. These techniques include using drip

irrigation systems, constructing small-scale dams and building ponds and boreholes. The following activities are planned:

- Conducting feasibility studies for installing small-scale irrigation systems in targeted communities in the three intervention municipalities of Dakoro, based on potential for irrigation (availability of water, costs of investment and potential productivity of irrigated crops), irrigation options adopted by communities and needs associated with the implementation of these options. Extension Services from Rural Engineering, Environment, Water and Agriculture will be responsible for carrying out initial feasibility studies;
- Development of drip irrigation system in a surface area of 40 ha;
- Development of Californian networks (PVC pipes) in a surface area of 100 ha ;
- Development of Californian networks with low cost boreholes and garden wells in a surface area of 100 ha ;
- Construction of wind-block fences to protect irrigated areas;
- Set-up of management committees for irrigated areas. Additional training of committee members will be organised on management and maintenance of irrigation systems as well as the creation of a sustainable financial system for maintenance/extension of infrastructures.

Activity 2.6.2: Develop ponds for pastoralists in the Bermo department.

Resources from the GEF will serve to support the skills of pond users in management of integrated water resources. This includes training on access to water for different users, popularising texts on management of water, hygiene and sanitation, and managing potential conflict. Specific activities include the following:

- Information and awareness-raising;
- Creation of a committee for integrated water management;
- Identification of training needs;
- Creation of training materials; and
- Organisation of trainings.

Training by service providers and technical follow-up by the Extension Services (Livestock, Environment, Rural Engineering, Agriculture and Hydrology) will be carried out the trainings.

A.6. Risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and measures that address these risks:

A complete Risk Log is included in Annex 1 of the project document. It includes risks identified in the project identification form (PIF) (see below) as well as newly identified risks. Additional barriers are included in the Barrier section above and are generally represented by the risks specified below. Most risks are organizational or strategic in nature, and mainly relate to relatively low current institutional and individual capacities of the public service structure in terms of adaptation. In summary, the following key risks were identified:

- Heavy administrative red tape slows down investments and financial support destined for vulnerable and poor communities/households (PIF);
- Limited management and monitoring capacities of field-based endeavours by municipalities and technical support staff affect quality of implementation (PIF);
- Limited extension of community-based adaptation programmes (PIF);
- Limited finance available for local communities and their institutions (PIF);
- Lack of adequate human and material resources for the implementation of this project could disturb the implementation of the various activities of the project (PIF);
- Impacts of climate change are far greater than predicted (PPG);
- Unusual and catastrophic climatic events during project implementation (PPG);
- Political will does not remain constant throughout the project (PPG);
- Villagers do not see the benefit of new practices or social conflicts hinder taking up the practices (PPG).

Mitigation measures for each risk are specified in the Risk Log (Annex 1), and have been systematically addressed in the project design.

A.7. Coordination with other relevant GEF financed initiatives

The first UNDP support LDCF financed project project is under closure and forms the basis for the adaptation intervention that will be supported under this new LDCF financed project, as described in the baseline project and in the adaptation alternative sections.

In Niger the list of programmes and projects, which deal with issues related to climate change, is important, and multilateral institutions play an important role in climate change-related activities in Niger, namely UNDP, FAO (mainly on GEF funds) and the World Bank and, to a lesser extent, the European Commission and the African Development Bank. In terms of coordination, it should be emphasized that the donor community supports the goals and agreements reached in Paris in 2005 to better coordinate and harmonize their development assistance, especially around the ‘Strategy for Rural Development’ (RDS). Coordination models (at national and regional level) are developed, such the *National Technical Commission on Climate Change and Variability* (CTNCVC) representing state institutions, private organizations, and civil society. Five thematic groups have been established to deal with priority issues such as agriculture, livestock, energy, water and infrastructure, including projects of the *Clean Development Mechanisms*. CTNCVC is a platform for sharing information, experiences from adaptations projects funded through international partners (including FAO, UNDP, World Bank). The *National Environmental Council for Sustainable Development* (CNEDD), which also participate in the Steering committees of LDCF FAO and PPCR. In this framework, CNEDD will play a great coordination role ensuring complementary and synergy between all adaptation projects.

UNDP is active in the area of the resilience of natural and human systems to climate change in Niger. It carries out three projects, whose objective are very close to the priorities of the PPCR/Niger, namely: (i) The ‘Agricultural Sector Resilience programme’, (ii) the ‘African Adaptation Programme’, and (iii) the ‘Community-based adaptation programme’. SPCR will scale up the lessons drawn from UNDP programmes. Moreover, UNDP is willing to participate in future missions to prepare the investment projects.

B. ADDITIONAL INFORMATION NOT ADDRESSED AT PIF STAGE:

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

The key government institutions directly involved in the implementation of this initiative include:

- The National Environmental Council for Sustainable Development (CNEDD) which is responsible under the supervision of the Prime Minister’s Office for coordinating national policy on environment and sustainable development. CNEDD has established an Executive Secretariat (SE/CNEDD), to formulate and implement its decisions. The SE/CNEDD comprises Technical Monitoring Units (UTS) in charge of monitoring and coordinating all PNEDD programmes. Furthermore, the National Technical Commission on Climate Change and Variability (CTNCVC) is in charge of the ‘Climate Change and Variability Programme’. The CTNCVC is made up of 29 members, representing state institutions, private organizations, and civil society. Five thematic groups have been established to deal with priority issues such as agriculture, livestock, energy, water and infrastructure.

The CNEDD has established decentralized structures (at regional, departmental and communal levels): Regional Environment Councils for Sustainable Development (CREDD), Departmental Environment Councils for Sustainable Development (CDEDD) and Communal Environment Councils for Sustainable Development (CCEDD). However, these decentralized structures are not currently functional. With regards to climate change, the CNEDD produces the National Communications, which include climate projections, the Strategy and Action Plan for Climate Variability and Change, the NAPA and its related background studies on current and projected vulnerability.

- The High Commissariat to the 3N initiative, which is responsible for the overall coordination and implementation of the 3N initiative that defines the national agriculture and food security policies. The High Commissariat is under the supervision of the President’s Office.

Several other environmental and meteorological institutions, located in Niamey, constitute a pool of expertise on climate and environment issues:

- The African Center for Meteorological Applications to Development (ACMAD),
- The Niger River Basin Authority (ABN)
- The Regional Agro-Hydro-Meteorological Training and Information Centre (AGHYMET)
- The African School of Meteorology and Civil Aviation (EAMAC) of the ASECNA,
- The Regional Center for Specialized Training on Agriculture (CRESA),
- The International Cultivation Research Institute on Semi - Arid Tropical Zones/ICRISAT.

Key Stakeholders at the Regional Level

The key institutions that will be closely involved in the implementation of this initiative at the regional level are described in the table below, including their main strengths and weaknesses.

	Stakeholder	Strengths	Weaknesses	Role in project implementation
1	Governorate of the Maradi Region	Ensure conformity of development actions with national strategic orientations Presidency of the regional dialogue panel Promote regional development	Lack of equipment and low human resources Low capacities with respect to CC adaptation	Member of the Project Steering Committee Supervise activities Animate regional dialogue panel
2	Regional Council	Democratically elected Ensure the involvement of local elected officials in development actions	Recently created Lack of equipment and low human resources Low capacities with respect to CC adaptation	Member of the Project Steering Committee Involvement of local elected officials into project activities Lobbying actions to technical and financial partners
3	Regional Directorate in charge of Planning, Land Planning and Community Development	Experience in coordinating and implementing development initiatives Animation of dialogue panels Represented in the Dakoro and Bermo Districts In charge of development of the Regional Land Use Plan	Lack of equipment and low human resources Low institutional capacities with respect to CC adaptation Low presence in municipalities	Animation of dialogue panels Promotion of complementarities and synergies between partners
4	Regional Directorate of Agriculture	140 staff including 21 women Represented in both Dakoro and Bermo districts Supervision of several agriculture projects (CAP2, Aguié, etc.) Good experience in terms of dissemination of improved seeds, vegetables crops, <i>warrantage</i> , etc. Involved in the NAPA process Monitor activities of the farming platform Focal point of regional SAP Involved in regional dialogue panel	Low mobility Low presence in municipalities	Technical support and supervision of resilient agriculture activities and practices Involved in the dissemination of improved seeds Support to farmers' associations
5	Regional Directorate of the Environment	79 staff including 11 women Represented in both Dakoro and Bermo Districts	Lack of equipment (motorbikes, computers, software,	Support to and supervision of the implementation of adaptation activities

	Stakeholder	Strengths	Weaknesses	Role in project implementation
	and the Fight Against Desertification	Represented in some of the targeted municipalities: Bermo and Gadabégi Good experience in implementing climate change adaptation activities Focal point of Land Sustainable Management dialogue platform Closely involved in NAPA process and in the implementation of the first LDCF project in Roubou	etc.) Low presence in municipalities	Closely involved in SWC/SPR activities.
6	Regional Directorate of Livestock	91 staff Represented in some of the targeted municipalities: Bermo and Gadabégi Good experience in managing activities related to pastoral systems Involved in the NAPA process and in the implementation of the first LDCF project in Roubou Involved in dialogue panels	Lack of equipment and low human resources	Support to and supervision of the implementation of pastoral activities
7	The Regional Directorate of Water	20 staff including 6 assistants Focal point of the water and sanitation regional commission Includes a mapping unit (modelling and monitoring of ground water) Represented in Dakoro Involved in dialogue panels Supervision of drinking water supply program	Not present in municipalities Lack of human resources Low participation in the first NAPA-Project	Support to and supervision of irrigation activities
8	Weather Maradi	5 staff including 3 climate observers Good experience in managing rain data at the Maradi Station	Lack of equipment and low human resources Low participation in dialogue panels, in the implementation of the first LDCF project and in the NAPA process	Production and dissemination of agro-meteorological information
9	University of Maradi	Good experience in terms of resilience to CC aspects of Sahelian populations (training packages, projects, PHD, etc.) Close to local actors Includes an division Geography and Geology specifically working on climate change adaptation aspects Includes good equipment and human resources Possibility of involving students in support to municipalities and communities	Recently created	Technical expertise in support to the implementation of the project Training capacities
10	National Agronomic Research Institute (INRAN) (Regional Center of Maradi)	Good experience in the selection of improved seeds : millet, sorghum, black-eyed peas Includes 5 specialists in seed selection Includes 2 specialists in integrated pest management Close to local actors	Lack of equipment	In charge of developing and disseminating improved resilient seeds Technical expertise

	Stakeholder	Strengths	Weaknesses	Role in project implementation
11	NGOs and development Association	82 organisations listed, including: AREN: Association that promotes the development of the livestock sector AGIR: Association that promotes integrated natural resource management ALAD: Association for economic self-sufficiency and development CDR: Association working on rural Development Good geographical coverage and representation in targeted municipalities	Heterogeneity in financial, technical and institutional capacities	Support to local communities in implementing resilient activities Synergies/ complementarities Experience sharing
13	Microfinance organizations	16 listed in the Region including KOKARI, ASUSU SA, MMD and TAIMAKO Local Financial institutions (SFD) in Dakoro, e.g. KOKARI and MMD (Mata Masu Dubara) supported by the PADMIF which provides them with credit lines and guarantees	Low access to their financial products	Support to local organisations and to the implementation of income-generating activities These microfinance organizations will be contacted to provide their services to communities and farmers, in particular through the support provided by the PADMIF
14	Regional Chamber of Agriculture			Networking of farming organisations
15	Projects and Programs	52 listed in the Region including the JMP, CAP-CR, PUSADER, <i>Grande Muraille Verte</i> , Fauna Corridor...	Low coordination	Complementarities/ synergies Experience sharing Co-financing

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

In terms of socio-economic benefits, the project, through the climate-resilient activities implemented, will build up financial, natural, physical and social capital of the selected communities. In relation to community-level investments, the project will directly benefit over 3,300 households and 25,000 people in the 7 municipalities selected. Indirect beneficiaries will also benefit from this project as project activities will emphasize valuing of shared resources such as the development of Koris tributaries of the Niger River, the realization of fire-walls, etc.

This initiative will support activities at the local level that are based on existent community-based practices and measures deemed effective and efficient. The project will support the scaling-up and the diffusion of climate resilient practices and IGA that have been tested as pilot and demonstrative activities with support from the first LDCF project and other initiatives such as ALP. Promoted climate resilient measures will be adapted to locally expressed needs in each of the supported communities. As part of the monitoring at the local level, cost-effective assessments of adaptation activities will be conducted for planning and strategic purposes.

The project will be looking at building adaptive capacity to manage climate change at the municipal and departmental levels from a number of angles: land use planning, climate change mainstreaming into development strategies and plans, production and use of meteorological data, sustainable land management, farming techniques, livelihood support, natural resources and ecosystem protection. These approaches will build up financial, natural, physical and social capital of local communities and will require expert input from a range of disciplines, illustrated by the large number of involved stakeholders.

Gender aspects have been considered during the entire design process. A gender expert from the UNDP CO actively participated in the baseline data collection mission in the Maradi region, ensuring that consultations conducted at the local level were gender balanced and that women were involved in the design process. Furthermore, project outputs and outcomes will contribute to an understanding of how adaptation responses can be designed to strengthen gender equality. The project indicators are to be tracked with data that are disaggregated by gender. The project is designed so that adaptation measures will be implemented in a participatory approach with women duly involved (and leading some of) the project interventions

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

The Scaling-up Community-based Adaptation initiative aims to build climate resilient communities in the Maradi Region able to effect transformative change and sustainable socio-economic development across municipalities and across the Region. It addresses five priorities that have been identified in the NAPA as urgent and immediate adaptation priorities. These priorities have been weighed for cost-effectiveness and sustainability before the proposed project components were selected and elaborated. This project proposes to reach this objective by supplying effective climate risk information and management tools to targeted communal leaders, technical extension services and community organizations and scaling-up and implementing locally-designed climate-resilient livelihoods options and measures.

Increasing the resilience to climate change impacts of populations from one of the most vulnerable regions of Niger does not entail a large number of different solutions. Local and rural populations must develop options and economies that are more climate-resilient. In that context, one option is to develop alternative businesses to agriculture and livestock breeding sectors that are deemed highly vulnerable to climate change. However, more than 95% of the population in the Maradi Region practice agriculture and food security has been a chronic problem in the region for several years. Increasing the resilience of farming and livestock breeding practices and techniques is therefore a critical condition to build climate resilient communities in the Maradi Region. Developing new businesses (e.g. through income generating activities) can help increase the resilience of populations by increasing their revenues, and should be promoted; nevertheless, finding solutions within the agricultural sector itself are preferable.

To strengthen resilience to climate change impacts to project could have targeted regions across the country, focusing support for instance on one or two municipalities per region. This approach was followed by the first LDCF project and other initiatives. These initiatives are demonstrative by nature and are limited in geographical extent. The proposed initiative will concentrate its activities and support in a productive landscape, focusing on seven adjoining municipalities. The idea is to reach a critical number of people following a cost-effective approach, which they will adopt and then promote locally-designed adaptation measures that have been previously tested during demonstrative initiatives.

The suggested outputs, activities and approaches have been identified and selected to meet the project objective and its expected outcomes in a cost-effective way. **Under Outcome 1**, this LDCF initiative proposes to **strengthen the capacities and means of municipal and regional authorities, technical services, and targeted communities** to promote climate resilient local development. The goal is to promote community-level economic development and planning, based on participatory processes and a good level of knowledge with regards to climate change impacts and options for adaptation. The project will therefore raise awareness among local authorities and decentralized institutions, train staff, and support a participatory review of local development plans. The advantages of this approach are manifold, in particular: (i) a good level of knowledge from all categories of staff and local population enables a common understanding of the problems generated by climate change as well as the adaptation options responding to local needs; and (ii) community involvement in the various activities will ensure buy-in of promoted activities and scaling-up to a broader audience of the promoted measures.

Adapting to climate change also requires relevant climate information. This initiative plans to set up an effective system to collect, analyze and diffuse climate information to rural communities, Extension Services and local decision makers. Most of the cost of this component comes from investments in meteorological equipment, since the activities will build on the existing DMN network and capacities, ensuring good cost-efficiency of the initiative. A possible alternative would be for the country to rely on the World Meteorological Organization or

other climate predictions from other international organizations. However, those organizations (i) can only work properly if data is provided by a large number of countries in the world, and (ii) generally do not provide prediction at the local level—and cannot do so without data. Therefore, the need to strengthen the climate data collection system for a country like Niger seems unquestionable. It is, in fact, a prerequisite to (i) prediction at the local level, and (ii) the exchange of data with international organizations for their respective predictions and climate scenarios which in turn could benefit Niger.

Under Component 2, this initiative will support **investments in locally-designed climate resilient technologies and practices and income-generating activities** that are resilient to more frequent and intense climate threats. These on-site investments will not only demonstrate appropriate climate risk management approaches, they will also bring direct relief to the most vulnerable communities in the Maradi Region. During the project design, a number of adaptation priorities have been assessed through documentation review, consultations at the national, regional, communal and local levels, and sites visits. After initial consultations conducted as part of the PPG, prioritized pilot adaptation agro-pastoral activities identified by stakeholders were the following:

- Promotion of alternative energy sources;
- Promotion of the use of improved cooking stoves;
- Research development of short cycle crop varieties resilient to droughts, and production and distribution to farmers of improved seeds;
- Promotion of water management and irrigation techniques;
- Communication and awareness campaigns for NGO's and communities;
- Development of IGAs;
- Support to the traditional mutual aid system called Habbanayé;
- Support to Soil and Water Conservation/ Soil Protection and Restoration (SWC/SPR) activities;
- Support to reforestation and tree planting;
- Development of farming and livestock input shops; and
- Awareness-raising support on animal care.

After careful and in-depth analysis, it has been decided to focus on five specific options: (i) Development of climate resilient Income-Generating Activities; (ii) Development of an operational supply chain for the production and diffusion of drought resistant seeds for millet, sorghum, tiger nuts and cowpea; (iii) Support to SWC/SPR activities; (iv) Development of the farming and livestock input supply system; and (v) Promotion of water management and small-scale irrigation techniques. These options have been selected on the basis of their potential for increasing the resilience of crop and livestock production, but also for increasing the resilience of the main socio-economic activities and ultimately creating incomes for beneficiaries, through a moderate investment. For instance, promoting alternative sources of energy or the use of improved cooking stoves are long processes that could involve a long list of stakeholders from the suppliers to the beneficiaries, which could ultimately lead to low results in terms of adaptation to droughts if farmers do not have improved capacities and the means to farm. These five options provide a good cost-benefit for farmers, but also for researchers and extension services as these field-level adaptive measures will build the capacities of national researchers and farmers to proactively identify, evaluate and share adaptive technologies. This will create productive synergies between farmer-led and institutional activities and outputs, while building critical local knowledge of ecological, and social diversity, among others.

C. DESCRIBE THE BUDGETED M & E PLAN:

The project will be monitored through the following M& E activities. The M&E budget is provided in the table below. The M&E framework set out in the Project Results Framework in Part III of this project document is aligned with the AMAT and UNDP M&E frameworks.

Project start: A Project Inception Workshop will be held within the first 2 months of project start with those with assigned roles in the project organization structure, UNDP country office and where appropriate/feasible regional technical policy and programme advisors as well as other stakeholders. The Inception Workshop is crucial to building ownership of the project results and to plan the first year annual work plan.

The Inception **Workshop** should address a number of key issues including:

- Assist all partners to fully understand and take ownership of the project: detail the roles, support services and complementary responsibilities of UNDP CO and RCU staff vis-à-vis the project team; discuss the roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms; discuss the Terms of Reference for project staff again as needed.
- Based on the project results framework and the LDCF related AMAT set out in the Project Results Framework in Section III of this project document; finalize the first annual work plan; review and agree on the indicators, targets and their means of verification; and recheck assumptions and risks.
- Provide a detailed overview of reporting, monitoring and evaluation (M&E) requirements: agree on and schedule the Monitoring and Evaluation work plan and budget.
- Discuss financial reporting procedures, obligations, and arrangements for annual audits.
- Plan and schedule PB meetings: clarify the roles and responsibilities of all individuals in the project organisation structure and plan meetings; preferably hold the first PB meeting within the first 12 months following the inception workshop.

An Inception **Workshop report** is a key reference document and must be prepared and shared with participants to formalize various agreements and plans decided during the meeting.

Quarterly:

- Progress made shall be monitored in the UNDP Enhanced Results Based Management Platform.
- Based on the initial risk analysis submitted, the risk log shall be regularly updated in ATLAS. Risks become critical when the impact and probability are high. Note that for UNDP/GEF projects, all financial risks associated with financial instruments such as revolving funds, microfinance schemes, or capitalization of ESCOs are automatically classified as critical on the basis of their innovative nature (high impact and uncertainty due to no previous experience justifies a classification as critical).
- Based on the information recorded in Atlas, a Project Progress Reports (PPR) can be generated in the Executive Snapshot.
- Other ATLAS logs will be used to monitor issues and lessons learned. The use of these functions is a key indicator in the UNDP Executive Balanced Scorecard.

Annually: Annual Project Review/Project Implementation Reports (APR/PIR): This key report is prepared to monitor progress made since project start and in particular for the previous reporting period (30 June to 1 July). The APR/PIR combines both UNDP and GEF reporting requirements.

The APR/PIR includes, but is not limited to, reporting on the following:

- Progress made toward project objective and project outcomes - each with indicators, baseline data and end-of-project targets (cumulative);
- Project outputs delivered per project outcome (annual);
- Lessons learned/good practices;
- AWP and other expenditure reports;
- Risk and adaptive management;

➤ ATLAS QPR.

Periodic Monitoring through site visits: UNDP CO and the UNDP-GEF regionally-based staff will conduct visits to project sites based on the agreed schedule in the project's Inception Report/Annual Work Plan to assess first hand project progress. Other members of the Project Board may also join these visits. A Field Visit Report/BTOR will be prepared by the CO and UNDP RCU and will be circulated to the project team and Project Board members no less than one month after the visit.

Mid-term of project cycle: The project will undergo an independent Mid-Term Evaluation at the mid-point of project implementation (expected to be in October 2015). The Mid-Term Evaluation will determine progress being made toward the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; highlight issues requiring decisions and actions; and present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties of the project document. The Terms of Reference for this Mid-term evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF. The management response and the evaluation will be uploaded to UNDP corporate systems, in particular the UNDP Evaluation Office Evaluation Resource Centre (ERC). The LDFC/SCCF AMAT as set out in the Project Results Framework in Section III of this project document) will also be completed during the mid-term evaluation cycle.

End of Project: An independent Terminal Evaluation will take place three months prior to the final PB meeting and will be undertaken in accordance with UNDP-GEF guidance. The terminal evaluation will focus on the delivery of the project's results as initially planned (and as corrected after the mid-term evaluation, if any such correction took place). The Terminal evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefits/goals. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF.

The Terminal Evaluation should also provide recommendations for follow-up activities and requires a management response, which should be uploaded to PIMS and to the UNDP ERC.

Learning and knowledge sharing: Results from the project will be disseminated within and beyond the project intervention zone through existing information sharing networks and forums.

The project will identify and participate, as relevant and appropriate, in scientific, policy-based roundtables and/or any other networks, which may be of benefit to project implementation though lessons learned. The project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects.

There will be a two-way flow of information between this project and other projects of a similar focus.

Audit: Project will be audited in accordance with UNDP Financial Regulations and Rules and applicable audit policies.

Type of M&E activity	Responsible Parties	Budget USD <i>Excluding project team staff time</i>	Time frame
Inception Workshop and Report	<ul style="list-style-type: none"> ▪ Project Manager (PIU) ▪ Project Director (CNEDD) ▪ UNDP CO, UNDP GEF 	Indicative cost: 10,000	Within first two months of project start up
Measurement of Means of Verification of project results.	<ul style="list-style-type: none"> ▪ UNDP GEF RTA/Project Manager will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members. ▪ PIU, esp. M&E expert 	To be finalized in Inception Phase and Workshop.	Start, mid and end of project (during evaluation cycle) and annually when required.
Measurement of Means of Verification for Project	<ul style="list-style-type: none"> ▪ Oversight by Project Manager ▪ PIU, esp. M&E expert 	To be determined as part of the Annual Work Plan's	Annually prior to ARR/PIR and to the

Type of M&E activity	Responsible Parties	Budget USD <i>Excluding project team staff time</i>	Time frame
Progress on <i>output and implementation</i>	<ul style="list-style-type: none"> ▪ Implementation teams 	preparation. Indicative cost is 25,000	definition of annual work plans
ARR/PIR	<ul style="list-style-type: none"> ▪ Project manager (PIU) ▪ UNDP CO ▪ UNDP RTA ▪ UNDP EEG 	None	Annually
Periodic status/ progress reports	<ul style="list-style-type: none"> ▪ Project manager and team 	None	Quarterly
Mid-term Review	<ul style="list-style-type: none"> ▪ Project manager (PIU) ▪ UNDP CO ▪ UNDP RCU ▪ External Consultants (i.e. evaluation team) 	Indicative cost: 30,000	At the mid-point of project implementation.
Terminal Evaluation	<ul style="list-style-type: none"> ▪ Project manager (PIU) ▪ UNDP CO ▪ UNDP RCU ▪ External Consultants (i.e. evaluation team) 	Indicative cost : 45,000	At least three months before the end of project implementation
Audit	<ul style="list-style-type: none"> ▪ UNDP CO ▪ Project manager (PIU) 	Indicative cost per year: 3,000 (12,000 total)	Yearly
Visits to field sites	<ul style="list-style-type: none"> ▪ UNDP CO ▪ UNDP RCU (as appropriate) ▪ Government representatives 	For GEF supported projects, paid from IA fees and operational budget	Yearly for UNDP CO, as required by UNDP RCU
TOTAL indicative COST Excluding project team staff time and UNDP staff and travel expenses		USD 122,000 (+/- 3.2% of total LDCF budget)	

Table 5: Project Monitoring and Evaluation


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

- A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT(S) ON BEHALF OF THE GOVERNMENT(S):** (Please attach the [Operational Focal Point endorsement letter\(s\)](#) with this form. For SGP, use this [OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Malam Gata Zouladaini	Commissaire chargé du Développement	MINISTERE DE L'ECONOMIE ET DES FINANCES	09/04/2011

B. GEF AGENCY(IES) CERTIFICATION

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

Agency Coordinator, Agency Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
Adriana Dinu Executive Coordinator, and Director a.i. UNDP/GEF		February 18, 2014	Mame Diop RTS, GLECRDS		Mame.diop@undp.org

ANNEX A: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

<p>This project will contribute to achieving the following Country Program Outcome as defined in UNDAF 2014-2018: Expected CPAP Outcome(s): UNDAF Outcomes 2014-2018: Outcome 1 “By 2018, vulnerable households and targeted communities enhanced their resilience in terms of food security, environment, hazards and socio-economic inclusion.” Outcome 2 “By 2018, supported national, regional and local institutions use adapted systems and mechanisms to prevent and manage hazards and risks, to sustainably manage the environment and the food security</p>						
<p>UNDAF Outcomes 2014-2018 indicators: 1.3 : Annual growth rate of farming production 1.4 : Annual growth rate of livestock raising 2.1 : Mean financial execution rate of projects and programmes in management/prevention of risks/hazards</p>						
<p>Applicable GEF Strategic Objective and Program: CCA-1: Reduce vulnerability to the adverse impacts of climate change, including variability, at local, national, regional and global level CCA-2: Increase adaptive capacity to respond to the impacts of climate change, including variability, at local, national, regional and global level CCA-3: Promote transfer and adoption of adaptation technology</p>						
<p>Applicable GEF Expected Outcomes: Outcome 1.3: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas Outcome 2.2: Strengthened adaptive capacity to reduce risks to climate-induced economic losses Outcome 3.1: Successful demonstration, deployment, and transfer of relevant adaptation technology in targeted areas</p>						
<p>Applicable GEF Outcome Indicators: (following AMAT tool) Indicator 1.1.1. Adaptation actions implemented in national/sub-regional development frameworks Indicator 1.2.5. Increase in agricultural productivity in the targeted areas (tons/ha) Indicator 2.1.1. Relevant risk information disseminated to stakeholders</p>						
	Indicator	Baseline	Targets End of Project	Source of verification	Risks and Assumptions	
	<p>Project Objective⁸ <i>Strengthen the responsiveness and adaptive capacity of administrative/ technical support services at the commune-level to enable generation of a critical mass of climate resilient communities and achieve more climate resilient economies in Maradi region, Republic of Niger (equivalent to output in ATLAS)</i></p>	<p>No. and type of actors in the 7 targeted municipalities of the Maradi Region with increased adaptive capacity to projected climate change impacts (AMAT indicator 2.2.1.)</p>	<p>Type and level: Less than 500 farmers in the municipalities of Roumbou and Bader Goula have acquired increased capacities to face climate change impacts and have adopted climate resilient activities (through support from the first LDCF and ALP/CARE) Except in the municipality of Roumbou, local populations do not currently have adaptive capacities to face droughts and, do not</p>	<p>Type and level: At least 3,300 households (more than 20,000 people), 40 technical staff from extension services (with a gender balance) and 90 targeted municipal council members implement adaptive and more resilient measures to climate change impacts</p>	<p>Survey Interviews APRs/PIR Policy reviews as part of APRs/PIR</p>	<p>Impacts of climate change far greater than predicted</p> <p>Unusual and catastrophic climatic events during project implementation</p> <p>Political will at the regional, departmental and communal levels does not remain constant throughout the project</p> <p>Unavailability of requisite human resources and data</p> <p>Insufficient institutional support and political commitment</p>

⁸Objective (Atlas output) monitored quarterly ERBM and annually in APR/PIR

		implement sustainable adaptive measures.			
Outcome 1⁹: Effective climate risk information and management tools supplied and adopted by municipal leaders, technical extension services and community organizations (CBOs and NGOs) of the 7 targeted municipalities of the Maradi Region (equivalent to activity in ATLAS)	Number of PDCs including specific actions and budget for climate change adaptation (AMAT indicator 1.1.1.1)	Type and level: 1 At project inception, Climate risks, climate change issues and adaptation actions are included in the PDC of Roubou	Type and level: 6 PDCs of the 6 targeted municipalities are updated to include climate risks and climate change issues, and to support the implementation of adaptation actions	Review of strategic documents and PDC APRs/PIR Policy reviews as part of APRs/PIR	Political will at the communal and departmental levels is lacking Coordination between government departments is weak Capacities of locally elected officials are low
	No. and type of targeted stakeholders of the seven targeted municipalities with access to relevant agro-meteorological information and climate risks management tools (AMAT indicator 2.1.1.)	% low (<25%). At project inception, extension services, municipal council members and rural population are not aware of predicted adverse impacts of climate change, except in the municipalities of Roubou and Bader Goula where the first LDCF and the project ALP/CARE have been active Type and level: 0 Agro-meteorological information are not produced nor disseminated to stakeholders of seven targeted municipalities	High awareness level : >75% of targeted population aware of predicted impacts of climate change and appropriate responses, including at least 50% of women. Type and level: At least 5000 appropriate stakeholders (including farmers, extension services staff, and communal council members) have access to appropriate and relevant agro-meteorological information.	Survey Interviews APRs/PIR	
Outcome 2: Locally-designed climate-resilient livelihoods options and measures implemented and scaled-up in the 7 targeted municipalities of the Maradi Region (equivalent to activity in ATLAS)	Number of targeted households which have increased their income through supported IGA (AMAT indicator 1.2.10)	Income generation is generally very low, especially within targeted communities which are considered as the most vulnerable to climate change impacts	At least 2000 households have increased their incomes through supported IGA	Local assessments at the community level (Questionnaire based appraisal - CBA) APRs/PIR	Villagers do not see the benefit of new practices or social (including gender related ones) conflicts hinder taking up the practices National service capacities are inadequate to accompany farmers' actions (meteorological services, advices/vulgarization, etc.) Capacities of agencies are not strengthened enough.
	Number of farmers with an access to improved seeds of millet, sorghum, tiger nuts and cowpea (AMAT indicator 1.2.5)	One hundred farmers had access to improved seeds of millet, sorghum and tiger nuts with support from the first LDCF project and Care/ALP	At least 3,300 farmers from the 7 targeted Communes use improved seeds millet, sorghum, tiger nuts and cowpea.	At least 3,300 farmers from the 7 targeted Communes use improved seeds millet, sorghum, tiger nuts and cowpea.	Local assessments at community levels (Questionnaire based appraisal - CBA) APRs/PIR

⁹ All outcomes monitored annually in the APR/PIR. It is highly recommended not to have more than 4 outcomes.

	% of targeted rural population that have adopted adaptation technologies by technology type (AMAT indicator 3.1.1.)	%; very low (<15%), except in the Communes of Roumbou and Bader Goula (and aside already exiting local coping mechanism)	80% of targeted rural population, including at least 50% of women, have adopted and implemented SWC/ SPR techniques and small-scale irrigation techniques	Local assessments at the community level (Questionnaire based appraisal - CBA) APRs/PIR	
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ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

<p>Project Consistency: Are the relevant GEF 5 focal/multifocal areas/LDCF/SCCF/NPIF objectives identified?</p>	<p>In addition to the clarifications provided at PIF stage, CCA 1, 2 and 3 have been included with associated outcomes and outputs in the focal area strategy framework.</p> <p>Furthermore, dedicated AMAT indicators for the suggested outcomes have been integrated into the project design.</p>
<p>Project Design: 11. Is (are) the baseline project(s), including problem (s) that the baseline project(s) seek/s to address, sufficiently described and based on sound data and assumptions?</p>	<p>During the PPG phase the baseline projects have been further refined and described. Their linkages with this LDCF initiative have been clearly defined in the project strategy section of the Project Document</p>
<p>13. Are the activities that will be financed using GEF/LDCF/SCCF funding based on incremental/ additional reasoning?</p>	<p>A detailed additional / adaptation alternative analysis has been provided for both components at the Project Strategy section in the Project Document. All activities are now based on incremental/additional reasoning.</p>
<p>14. Is the project framework sound and sufficiently clear?</p>	<p>The project strategy is based on two complementary components for which outputs and activities have been clearly described. Linkages between technical assistance measures and the investments have been clearly articulated.</p>
<p>15. Are the applied methodology and assumptions for the description of the incremental/additional benefits sound and appropriate?</p>	<p>As mentioned above, the additional cost reasoning and the project framework have been clarified and clearly described.</p>
<p>16. Is there a clear description of: a) the socio-economic benefits, including gender dimensions, to be delivered by the project, and b) how will the delivery of such benefits support the achievement of incremental/ additional benefits?</p>	<p>The socio-economic benefits have been further described in the project document and a strong attention has been given to gender dimensions.</p>
<p>18. Does the project take into account potential major risks, including the consequences of climate change and provides sufficient risk mitigation measures? (i.e., climate resilience)</p>	<p>A complete risk log, including mitigation measures, is annexed to the Project Document. It describes all risks identified, their type/impact, and identified management measure.</p>
<p>Project Financing 24. Is the funding and co-financing per objective appropriate and adequate to achieve the expected outcomes and outputs?</p>	<p>Co-financing from the Government and UN Maradi Joint Programme will support the achievement of expected Outcomes and Outputs. More details are presented in the baseline section.</p>
<p>26. Is the co-financing amount that the Agency is bringing to the project in line with its role?</p>	<p>The UNDP Cash contributions includes:</p> <ul style="list-style-type: none"> ● Purchase of two vehicles ● Recruitment of seven UNVs, one for each intervention municipality ● Contribution to VNU operation costs ● Transportation equipment

Comments by US on LDCF PIF Niger

“Strengthen the responsiveness and adaptive capacity of administrative/technical support services at the commune-level to enable generation of critical mass of climate resilient communities and achieve more climate resilient economies in Maradi region, Republic of Niger»

GEFSEC Project ID: 4701

GEF Agency Project ID: 4790 (UNDP) GEF Agency: UNDP

US Comments	UNDP Response at PIF Stage	UNDP Response at CEO Endorsement submission stage
<p>1. Shift emphasis of Focal Area Objective CCA-2/Expected Focal Area Output 2.2.1 from strengthened capacity to rapidly respond to extreme weather events to strengthened capacity to reduce climate risks, i.e., risk reduction rather than more effective disaster response, which is arguably <i>not</i> adaptation.</p>	<p><i>The proposed project is mainly aligned with Objective 2, which is focused on “increasing adaptive capacity to respond to the impacts of climate change, including variability, at local, national, regional and global levels”.</i></p>	<p>The proposed project is still aligned with objective 2, which is focused on “increasing adaptive capacity to respond to the impacts of climate change, including variability, at local, national, regional and global levels”</p>
<p>2. Provide stronger description of how the project and its two expected outcomes will contribute to Focal Area Objective CCA-2/Expected Focal Area Output 2.2.1. It is currently unclear how the proposed activities will strengthen the adaptive capacity of national and regional centers and networks.</p>	<p><i>Councillors and technical extension workers and CBOs, NGOs, and extension workers at the commune-level in each Maradi vulnerable communes will be trained to understand opportunities and threats associated with long-term climate change; and integrate this new learning into their programming</i></p>	<p>Trainings and awareness-raising on opportunities and threats associated with long-term climate change will be provided to municipal council members, departmental and municipal extension service technicians (agriculture, environment, livestock), CBOs and NGOs. These trainings will be conducted in a way to ensure that local and departmental targeted stakeholders have sufficient capacities to further integrate climate risk management into programming, including municipal development plans.</p> <p>Taking due account of local knowledge, customs and risk reduction strategies, the project will aim to demonstrate how efficient and effective community-based climate resilient strategies and practices, mainly based on farming and livestock breeding, can be up-scaled and adopted by a broadest audience and improve living conditions in a sustainable manner. The project will promote climate resilient farming and livestock breeding pastoral practices and technologies (e.g.</p>

US Comments	UNDP Response at PIF Stage	UNDP Response at CEO Endorsement submission stage
		production and use of drought resistant seeds, small-scale irrigation techniques and sustainable management of local water resources, pasture and rangeland management), and resilient income generating activities in the selected seven municipalities. These measures will be implemented through a close collaboration with local authorities and technical partners such as local civil society organizations, farmers' organizations, and research institutions such as INRAN. They will promote the use of improved farming and livestock breeding technologies and practices and disseminate research results across the region. These technical partners will be key vehicles to up-scale and disseminate climate resilient options and best practices widely.
<p>3. Provide clearer description of how this project will include "...policy support aimed at helping countries to mainstream adaptation into local/regional policies and planning...", mentioned on page 8 as part of "The Preferred Solution and Barrier Analysis." It is not clear in the PIF how the project includes a policy and planning component, which would help scale up adaptive capacity.</p>	<p><i>The proposed LDCF project include policy support under output 1c "Communal development plans and rural/community development programmes/projects reviewed and updated to integrate effective climate risk management and enable more climate-smart investment".</i></p> <p><i>Adaptation activities should not be disconnected from local development strategies and need to be including in regional/local plans.</i></p>	<p>Support for mainstreaming climate change within Communal Development Plans and investments at the local level will be provided. Vulnerability assessments specific to each supported community will be carried out and community adaptation plans will be developed. These plans will be incorporated in the revision of the PDCs and will be based on the Integrating Climate Change Dimensions (IDCC) guidelines developed by CNEDD.</p>
<p>4. Provide clearer description of what UNDP considers to be a "critical mass". The term is used a lot in the PIF. What is it and how will UNDP know that critical mass has been achieved?</p>	<p><i>Existing community-based adaptation programmes are limited in geographical extent and lack sufficient resources to comprehensively finance adaptation activities. They do not encompass a sufficient number of communes and thus do not generate a critical mass of climate-resilient rural producers capable of inspiring and effecting transformative change across communities and the productive landscape. In this context, scaling up and/or replication of adaptation efforts in vulnerable communes in Niger have been inadequate to ensure climate resiliency at the broadest landscape scale.</i></p>	
<p>5. Help us understand why</p>	<p><i>CARE is working in 20 communities in</i></p>	<p>In Bader Goula, Azagor, Soly-</p>

US Comments	UNDP Response at PIF Stage	UNDP Response at CEO Endorsement submission stage
<p>CARE's Adaptation Learning Program is considered part of the baseline project, given that the ALP is about strengthening and scaling up community-based adaptation. What is the additionality of this project to the ALP? In addition, ALP is mentioned as part of the baseline for Component 1, but not as part of the baseline of Component 2. What is the reason behind this difference?</p>	<p><i>DAKORO department (Maradi Region) and will affect nearly 12,000 beneficiaries during the five years that their programme is implemented (2010-2014). The project will form close partnerships with local non-governmental organizations (NGOs) and community-based organizations (CBOs), who work directly with vulnerable groups to support them in implementing household-level adaptation strategies, including new agricultural techniques and livelihood diversification strategies.</i></p> <p><i>Under this baseline, technical and communications tools developed will be an input to support the identification, understanding, quantification and assessment the degree to which a rural community is vulnerable to climate change and variability, and its capacity to cope and adapt to anticipated impacts.</i></p>	<p>Tagriss and Roumbou in the Department of Dakoro, the project ALP/CARE is facilitating a participatory community based adaptation action planning process. This support has created, to some extent, a space to build the capacities of targeted rural communities and CBOs to understand local climate hazards and risks and identify climate change adaptation strategies. Nonetheless, the PDCs in the four targeted municipalities have not yet taken into account the PAAC in their revisions. According to the mid-term evaluation of ALP done in the 2012, municipalities also expressed the need to have more PAACs (have a critical mass of PAACs in the municipality). However, the programme ALP has limited financial means and cannot support the creation of more community adaptation action plans alone. The project ABC-Maradi could take up, adapt and duplicate this.</p> <p>Although CARE/ALP initiative has produced excellent examples of adaptive and resilient measures and practices at the local level, there is insufficient technical, institutional and financial capacity at the local and departmental levels to scale up these measures and practices. This initiative has only supported isolated communities and was limited in geographic extent. It highlighted and supported new climate-resilient practices and technologies, and now these practices need to be spread to a wider audience through additional support from the proposed project.</p>
<p>6. Better access and use of climate information and hydro-met advisories is very important. Please provide a stronger description of how the project will try to ensure that such information is driven by</p>	<p><i>During PPG Phase, participatory approach will be developed to ensure that project objective and outcome are approved and endorsed by all stakeholders at local level. In alignment with the approved project objective, comprehensive stakeholder analysis will be conducted to determine stakeholder needs vis-à-vis</i></p>	<p>The project design was formulated as a result of extensive stakeholder consultations. The initial draft project strategy was presented to a wide range of stakeholders (national/regional and municipal</p>

US Comments	UNDP Response at PIF Stage	UNDP Response at CEO Endorsement submission stage
<p>the needs of the users and delivered through appropriate user-friendly channels. As part of that description, include relevant stakeholders in Section B.5, e.g., climate information service providers, hydro-med advisories, and research institutions, such as ACMAD, AGRHYMET, and FEWSNET, that could provide support in gathering and analyzing weather data and diffusing climate advice to key local stakeholders. This information is currently missing.</p>	<p><i>adaptation to potential climate change impacts, the effectiveness of current local responses, barriers to adaptation, expertise that might be helpful in designing the implementing the project and those who may have been involved in similar initiatives or planning processes</i></p> <p><i>PPG resources will be utilized to engage key partners in the country (such as ACMAD, AGRHYMET, and FEWSNET) to support communities in their adaptation strategies.</i></p>	<p>levels) at a regional workshop in Dakoro and at a national workshop in Niamey in February 2013. Inputs and comments received during this workshop were used to further develop the project design and the core of the Project Document. Furthermore, two successive missions were carried out in the Maradi Region and the prioritized municipalities to assess the level of vulnerability of local communities towards climate change, define local adaptation priorities and strategies and discuss institutional arrangements.</p> <p>Support will be provided for the establishment of sustainable and effective communication systems between the National Directorate for Meteorology, key extension services, local decision-makers and rural communities to enable these key stakeholders to access and use relevant climate information and hydro-meteorological advisories and information on climate change impacts. The SCAPRUs (Community Early Warning System and Emergency Response) will be created (or revitalized if already existing) in supported communities. Furthermore, two rural radio will be involved to disseminate climate data and agro-hydro-advice. MoUs between the National Directorate of Meteorology (and its staff at local and departmental levels) and these two rural radio will be signed.</p>

ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS¹⁰

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

B. PROVIDE DETAILED FUNDING AMOUNT OF THE PPG ACTIVITIES FINANCING STATUS IN THE TABLE BELOW:

PPG Grant Approved at PIF:			
<i>Project Preparation Activities Implemented</i>	<i>GEF/LDCF/SCCF/NPIF Amount (\$)</i>		
	<i>Budgeted Amount</i>	<i>Amount Spent To date</i>	<i>Amount Committed</i>
Activity 1: Needs assessment and technical feasibility of adaptation options and measures	25,000	21,772	3,228
Activity 2: Project Development	5,000	5,000	0
Activity 3: Stakeholders Consultation			
Activity 4: Develop a financial plan and co-funding scheme	20,000	15,144	4,856
Total	50,000	41,916	8,084

¹⁰ If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent fund, Agencies can continue undertake the activities up to one year of project start. No later than one year from start of project implementation, Agencies should report this table to the GEF Secretariat on the completion of PPG activities and the amount spent for the activities.

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

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