



PROJECT IDENTIFICATION FORM (PIF) ¹
PROJECT TYPE: FULL SIZED PROJECT
TYPE OF TRUST FUND:LDCF

PART I: PROJECT IDENTIFICATION

Project Title:	Implementing adaptation technologies in fragile ecosystems of Djibouti's Central Plains		
Country(ies):	Djibouti	GEF Project ID: ²	5021
GEF Agency(ies):	UNEP	GEF Agency Project ID:	00891
Other Executing Partner(s):	Ministère de l'urbanisme de l'habitat de l'environnement et de l'Aménagement du Territoire (MUHEAT)	Submission Date: Resubmission date	May 2012 August 2012
GEF Focal Area (s):	Climate Change Adaptation	Project Duration(Months)	60
Name of parent program (if applicable): ➤ For SFM/REDD+ <input type="checkbox"/>		Agency Fee (USD):	736,000

A. FOCAL AREA STRATEGY FRAMEWORK³

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Indicative Financing from relevant TF (GEF/LDCF/SCCF) (\$)	Indicative Cofinancing (\$)
CCA-1	1.1	1.1.1	500,000	1,120,000
(select) (select)	1.2	1.2.1	4,250,000	14,810,000
(select) (select)	1.3	1.3.1	1,250,000	5,000,000
CCA-2	2.1	2.1.1	325,000	0
(select) (select)		2.1.2	600,000	910,000
(select) (select)	Monitoring and Evaluation		85,000	40,000
Project management cost ⁴			350,000	200,000
Total project costs			7,360,000	22,080,000

¹ It is very important to consult the PIF preparation guidelines when completing this template.

² Project ID number will be assigned by GEFSEC.

³ Refer to the reference attached on the Focal Area Results Framework when filling up the table in item A.

⁴ GEF will finance management cost that is solely linked to GEF financing of the project.

B. PROJECT FRAMEWORK

Project Objective: To reduce community-level vulnerability by implementing priority actions in Djibouti's NAPA in fragile ecosystems, using innovative approaches					
Project Component	Grant Type (TA/INV)	Expected Outcomes	Expected Outputs	Indicative Financing from relevant TF (GEF/LDCF/SCCF) (\$)	Indicative Cofinancing (\$)
1. Protection against water-related CC hazards	TA, INV	1.1 The negative impacts of droughts and floods are reduced or averted	1.1.11 Protective measures against floods, droughts and inundation in cities and settlements (an estimated 4km of shorelines and banks protected) 1.1.2 A hydrological model and preventative forecast of water resources availability and options in fragile ecosystems	2,925,000	2,160,000
2. Ecosystem rehabilitation, recovery and resilience	INV	2.1 Fragile ecosystems are productive and resilient to CC	2.1.1 Restored vegetative cover and soil stabilized in an estimated 100 ha in Hanlé central plains ecosystems 2.1.2 An estimated 200ha of restored mangroves in central coastal zones of Tadjourah 2.1.3 Restored reefs along 2 km ² in coastal zone of Tadjourah	1,750,000	10,160,000
3. Sustainable and resilient livelihoods	INV, TA	3.1. Livelihoods that are sustainable and resilient, contribute to maintaining ecosystem services 3.2. Barriers to resilience are removed	3.1.1 10 Solidified wells, reduced pumping rates, and sustainable water use 3.1.2 Productive oasian ecosystems that provide livelihoods and ecosystem services in 100 ha. 3.2.1 Increased, diversified and resilient livelihoods from the introduction of sustainable alternative economic development activities.	1,750,000	8,400,000
4. Institutional capacity	TA	4.1 Increased capacity of institutions and communities to proactively adapt	4.1.1 Increased enforcement and monitoring capacity 4.1.2 Increased adaptive planning capacity at local levels	500,000	1,120,000
Monitoring and Evaluation	TA			85,000	40,000
Project management Cost ⁵				350,000	200,000
Total project costs				7,360,000	22,080,000

⁵ Same as footnote #3.

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

Sources of Cofinancing for baseline project	Name of Cofinancier	Type of Cofinancing	Amount (\$)
National Government	Government of Djibouti (PIP for INDS implementation)	Grant	16,000,000
National Government	Government of Djibouti	In-Kind	640,000
NGO	CERD	Grant	1,910,000
Bilateral Agencies	Arab Fund for Social and Economic Development (FADES)	Grant	500,000
National Government	Government of Djibouti (MAEM-RH)	Grant	750,000
Other Multilateral Agencies	Islamic Development Bank	Grant	220,000
Multilateral Agency	UNEP	Grant	2,060,000
(select)		(select)	
(select)		(select)	
(select)		(select)	
Total Cofinancing			22,080,000

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

NOT APPLICABLE

GEF Agency	Type of Trust Fund	Focal area	Country name/Global	Project amount (a)	Agency Fee (b)²	Total c=a+b
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
Total Grant Resources				0	0	0

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

² Please indicate fees related to this project.

PART II: PROJECT JUSTIFICATION

A. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:

A.1.1. FOR PROJECTS FUNDED FROM LDCF/SCCF: THE LDCF/SCCF ELIGIBILITY CRITERIA AND PRIORITIES:

The Government of Djibouti is seeking a second tranche of funding from the LDCF for a Full-Sized Project to implement priority activities as outlined in the National Adaptation Programme of Action (henceforth referred to as NAPA). While the first NAPA implementation project funded through LDCF resources addresses the first NAPA priority, this project addresses NAPA priorities 1,3,7,8,9 and 10, as well as others that were only partly addressed in the first NAPA project (“Implementing NAPA priority interventions to build resilience in the most vulnerable coastal zones in Djibouti”, approved in 2010). The project also addresses newly identified adaptive capacity gaps that were not previously addressed due to lack of available funds.

The project is consistent with the Revised Programming Strategy on Adaptation to Climate Change for the LDCF and SCCF and follows the Results-Based Management Framework (RBM). As seen in Table A, the project contributes to all three LDCF-SCCF Climate Change Adaptation (CCA) objectives: Reducing Vulnerability, Increasing Adaptive Capacity and Adaptation Technology Transfer.

This project will implement climate change adaptation measures that can protect and enhance human populations, productive assets and natural ecosystems, with a geographic focus on the vulnerable central pastoral lowlands (the coastal area of Tadjourah (center) and the fragile semi-desert region of Hanlé (west)) identified as most vulnerable to climate change from the NAPA and National Communication of Djibouti and being of strategic importance for the government as far as national development is concerned. Project activities are articulated in four co-related components: (1) protective measures against the impacts of climate change induced water related hazards; (2) rehabilitation of fragile ecosystems that provide a basis for livelihoods; and (3) promotion of sustainable and resilient livelihoods; and 4) targeted institutional capacity development. As a result the vulnerability of communities, ecosystems and infrastructure will be reduced, and the institutional capacity to address climate variability and climate change will be further enhanced.

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

Djibouti, as an LDC who has completed its NAPA in 2006, is eligible to receive support from the LDCF for implementation of urgent and immediate adaptation measures. Djibouti has recently begun the implementation of its first NAPA project and is now seeking to complete the implementation of immediate adaptation priorities.

This project aims to implement additional climate change adaptation measures that can protect and enhance human populations, productive assets and natural ecosystem resilience in the regions of Tadjourah and Hanlé (regions that are currently not benefitting from any adaptation activities). The proposal has been developed in compliance with LDCF procedures and best practice and represents the response to immediate and long-term adaptation needs, demonstrating program conformity. This project has been developed in order to constitute a package of complementary interventions to the other adaptation and baseline activities in the country. The ecosystem restoration approach (Component 2) ensures sustainability over the long-term while stakeholder involvement at the local, community, regional and national levels encourage wider participation and capacity building for adaptation activities. The use of innovative adaptation technologies and methods promote a learning-by doing approach. The project will also ensure complementarity by identifying key adaptation projects

and activities, for coordination so as to ensure synergies, value-added, cost-effectiveness and eliminate any duplication of effort.

As demonstrated in Table A, the project will be:

Reducing Vulnerability: The project will reduce vulnerability by implementing urgent and immediate adaptation measures in vulnerable areas and by strengthening the capacity of key institutions associated with adaptation planning and management.

Increasing Adaptive Capacity: The project will increase adaptive capacity to respond to the impacts of climate change by implementing a set of targeted protective measures against water-related climate change hazards, and by promoting an ecosystem-based approach to adaptation (EBA). The project will promote targeted vulnerability and risk assessments, climate change impact monitoring and data collection / management; expansion and rehabilitation of existing infrastructures related to climate monitoring, with particular emphasis on completing the early warning system; and development of institutional capacity.

Carrying out Adaptation Technology Transfer: The project will promote transfer and adoption of adaptation technology, particularly to ensure rehabilitation of key productive and protective assets, climate and vulnerability monitoring capabilities as well as the demonstration best practices. By promoting pilot interventions, the project will promote learning and increase the adaptive capacity of stakeholders to manage, monitor and utilize new technologies.

A.2. NATIONAL STRATEGIES AND PLANS OR REPORTS AND ASSESSMENTS UNDER RELEVANT CONVENTIONS, IF APPLICABLE, I.E. NAPAS, NAPS, NBSAPS, NATIONAL COMMUNICATIONS, TNAs, NIPs, PRSPs, NPFE, ETC.:

This project is consistent with Djibouti's Poverty Reduction Strategy Paper (PRSP), which was finalized in 2004, and which is oriented along three inter-related pillars: Financial stabilization and economic restructuring; social development and environment; and regional integration. The Social Development and Environment pillar of the PRSP foresees the implementation of a disaster prevention strategy focusing on drought and flood prevention, as well as the promotion of food security through alternate livelihoods. The protection of the environment and the prevention of climate-induced disasters, are therefore closely linked to the reduction of poverty, and benefit from political commitment at the highest level.

In addition, as a follow-up to the PRSP, the Djiboutian Presidency launched a Social Development Initiative in 2006 (INDS), to which all ministries contribute through the implementation of sectoral plans and programs. This project will reinforce the sustainability of other sectoral plans and programs by ensuring that their impacts are not affected by climate change. By strengthening adaptive capacity at the local level, this project will also make a significant contribution to the implementation of the INDS.

Djibouti has also launched a number of sectoral initiatives which serve as an important backdrop to this project, including: the Strategy to Integrate Women to Development (SNIFD), the Schéma Directeur de l'Eau 2007-2010 (a 3 year plan which foresees the development of surface water conservation and sustainable use, under revision), and the national agriculture policy. In the Environment sector, Djibouti also adopted a National Action Plan on Environment (PANE) and a National Law on Environment (Loi Cadre sur l'Environnement, 2000).

Furthermore, this project will add resilience-building measures onto the nationally-driven Public Investment Programme (PIP), that serves as a national budget and constitutes a major tool of implementation for the INDS. It outlines all foreseen public expenditures for the country, including contributions from development partners (bilateral and multilateral).

This second NAPA project is the natural continuation of the first LDCF-funded project and as such, inserts itself in a similar institutional and policy context. It seeks to implement remaining NAPA priorities, or NAPA priorities that were not sufficiently addressed in the first project due to lack of available funds, while at the same time applying most recent innovations in the field of adaptation, in order to generate a critical mass of adaptation activities in the country.

B. PROJECT OVERVIEW:

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

B.1.1 Baseline Situation/Problem

Djibouti's population is estimated at 883,000⁶ people, and nearly two-thirds of the population resides in or around the city's capital. It is estimated that currently approximately 42% of the total population lives in extreme poverty, while an estimated 75% live in relative poverty. In rural areas, 96,7% of people are relatively poor and suffer from chronic food insecurity⁷. Rural populations, estimated at 150,000 people, are semi-nomadic or nomadic pastoralists living in isolated villages, comprised mostly of traditional dwellings (wood, stone or in some cases bricks and steel).

As a relatively small country (with 23.200 km² of land surface and 71290 Km² of maritime area, of which 370 km of coastline), Djibouti's location is its main economic asset, as it handles significant volumes of imports and exports to and from Africa. The tertiary sector (services) accounts for nearly 83% of the GDP, while the primary and secondary sectors (agriculture and manufacturing) account for 4% and 13% respectively⁸. The agriculture sector contributes to only 3% of GDP, although nearly 20% of the population depends on it for livelihoods. The country disposes of only 10,000 ha of irrigable land, only 10% of which are under cultivation. (PANA, 2002). There are approximately 1,800 agricultural operations, employing nearly 3.600 people. The average plot size is a half-hectare (MAEM-RH, 2009). In most parts of the country, agriculture uses the oasian cultivation modes but remains of a subsistence level. Production is focused on vegetable and fruit production, with an estimated 7000 tons produced in 2008, covering less than 10% of national needs. Low yields are mostly due to low soil fertility, water scarcity and salinity, compounded by inappropriate land use planning in productive spaces, inadequate production techniques and inappropriate cultivation practices.

Activities in the primary sector are therefore limited to small-scale (subsistence) vegetable growing, livestock and pastoral activities and are further constrained by droughts and general aridity. Livestock is an important part of economic activity for rural Djiboutian, occupying nearly 2 million hectares throughout the country.

Fisheries remain artisanal and are limited to the local market, despite a high potential (estimated to 28,000 tons). This lack of development of the primary sector is mostly due to the lack of natural resources (there is a dearth of fertile land and severe constraints related to water) as well as low technical and institutional capacities governing their management. Recreational and touristic activities are still relatively unexploited in comparison with the high potential for ecotourism (related to the presence of pockets of biodiversity, reefs, and particularly singular landscapes) because markets have

⁶ The last published census results in 1998, census results for 2009 have yet to be published.

⁷ UN World Food Programme, Emergency Food Security Assessment, Djibouti, 2009

⁸ Government of Djibouti, 1998 data, <http://www.presidence.dj>

yet to be fully developed.

In 2007, a national nutrition survey determined that the nutritional situation, particularly that of children, remained a concern, with an occurrence of acute malnutrition of 17%. A number of factors point to the aggravation of poverty over the past few years: recurrent droughts, economic crisis and inflation has led to a decrease in purchasing power, food insecurity, and in certain areas, famine. From a public health perspective, there remains a prevalence of malaria and respiratory diseases, as well as diarrheas and infectious diseases, many of which are closely linked to water availability and management, as well as nutrition. Sanitation is absent in most rural areas, and waste management is also severely impeded in cities and small settlements.

The total area of forested land (ligneous biomass) in the country is 70,000 ha of which 22,000 are occupied by forest formations and 48,000 consist in steppes and shrub-land. Djiboutian flora is exhibiting signs of regression with a sharp tendency towards desertification. The main cause of this desertification is overgrazing – itself a result of settling among pastoral peoples – and wood cutting for fuel and shelter needs. This degradation of soil cover exposes the soils and accelerates water erosion during the seasonal floods and strong rain events.

Water availability is the major constraining factor for the country's economy. As the country has no permanent surface water bodies, it relies mostly on groundwater (95%) and on wadis that flow towards the sea seasonally during the rains. Evaporation exceeds 2000 mm annually, ten times more than the annual rainfall of 150 to 250mm per year. Water infrastructure investment (boreholes, retention basins, dams or artificial ponds) are costly, and their planning is therefore subject to careful consideration. Unfortunately, there remains gaps in the understanding of groundwater availability and quality.

Furthermore, semi-nomadic populations are concentrated around wadi beds and water points, where agricultural perimeters are located. New settlements are sometimes built directly in the dry beds of wadis, creating an unsustainable and dangerous situation where seasonal flooding and flash floods are jeopardizing local communities' lives and assets.

There are therefore a number of baseline issues that must be addressed in order to achieve resilience and adaptation to climate change in Djibouti:

- Achieving higher agricultural yields, both from the farming sector and the pastoral sector, using better land use and water resource efficiency is a key challenge from a food security perspective as well as from a climate change perspective, because climate extremes and variability in the country are likely to impact the already fragile ecological balance that provides a basis for rural livelihoods.

- Ensuring that urban growth and settlement follows a sustainable path is also a key challenge, as both traditional and modern lifestyles mingle, and as local institutions lack the means to keep pace with increasing numbers of urban dwellers. Water supply, waste management and most importantly urban planning and infrastructure are also likely to be impacted by climate change unless changes are made to the way cities are built and citizens are settled.

B.1.2 Projects addressing the baseline situation

This project builds on a number of baseline initiatives that are aimed at promoting food security, social development and overall economic growth in Djibouti, taking into account the serious limitations to natural resources in the country (e.g. land, water).

The government of Djibouti, with the assistance of a number of external partners, implements a yearly **Public Investment Programme (PIP)** that supports priorities contained in the INDS and other sectoral

programmes and policies. The total value of this PIP for 2011 was 40.3 million USD and 30.4 million US\$ for 2012⁹. Although updated figures are still being developed within the Ministry of Finance and planning, similar levels of investment are expected for the next 4 years. The PIP includes national investments in all sectors, including water and sanitation, agriculture research and development, economic growth and governance, health, education, social development, and environment¹⁰. This project proposes to build on the PIP to increase the resilience of investments in the Central plains areas of Tadjourah (coastal) and Hanlé (inland), both of which have been determined through the second national communications as areas of priority interest for adaptation related investment. This project will build on PIP investments in the following areas:

- **Water mobilization baseline:** a key national development, water mobilization through the creation of new wells, boreholes, water points, and pipelines for drinking and irrigation waters is being supported by the national government, the European Commission, the World Bank, and IFAD. Large and medium scale investments are being conducted throughout the country. However, all partners recognize that there is a lack of knowledge on future water availability – particularly in the western part (Hanlé) and that this gap hinders the potential for sustainable and resilient future water development in the area. Furthermore, most investments are focused on ensuring adequate water supply to the coastal area, where population is concentrated (with stronger investments in Djibouti City); investments in the Western and central parts of the country are much less concentrated, and much of the water infrastructure in these areas are degraded, or operating with outdated equipment (or manual labor). Finally few of these investments are taking climate change into considerations, creating a potentially unsustainable situation should groundwater availability decline due to climate change.

- **Agriculture:** a selected number of initiatives are underway to promote greater food security in the country. These include initiatives supported through the PIP by the Ministry of Agriculture, Livestock and the Sea (MAEM) with support from multilateral and bilateral partners, including IFAD, FAO, European Union, USAID and French Cooperation. Activities are focused on promoting better land and water management to take into consideration the existing limits to production, such as soil fertility, salinity, aridity, as well as institutional constraints such as access to markets and credit, land tenure, and local organization. Some of these activities include a climate component, for example the multi-partner PROMES-GDT project (with GEF funding), however they are not extended to the totality of the Djibouti territory. Agricultural research into new products for diversification are also underway through the CERD; and there is also targeted support for fisheries production and illegal fisheries control. This project proposes to build specifically on the baseline programming supported by IFAD (Microfinance and Micro-enterprise project) which aims at promotign alternate sources of livelihoods and the development of new economic avenues for rural people in Djibouti.

- **Infrastructure and energy:** The government, along with bilateral and multilateral partners (regional banks, Japan, OPEP, Kuwait and the Arab Fund) is also implementing a long-term program for the rehabilitation and construction of new roads, a new port infrastructure (in Tadjourah), buildings and other major assets. This includes the development of geothermal energy, as well as the rehabilitation of existing plants. There are small, ad hoc efforts, towards the development of solar (PV) energy, particularly around schools and water points.

- **Social development:** a large number of efforts from the government and its partners are focused on health and education, particularly ensuring universal access, by promoting the creation of settlement points where services can be provided (schools and clinics). Investments in infrastructures and in their

⁹ this includes expenditures to date and committed for 2012. Planned expenditures for future years were not available at the time of writing.

¹⁰ Unless they are the object of specific projects, the investments of the PIP are not usually earmarked regionally. All of the public investment programmes are funded by external partners.

operations are occurring in all parts of the country. Efforts target urban poverty, as well as gender development and special assistance to refugees and migrants.

- **Disaster Risk Management:** Some initiatives are underway in Djibouti to prevent and manage natural disasters, including floods, coordinated through the Centre d'Études et de Recherches de Djibouti (CERD) mostly focused on Djibouti and on national-level policy mechanisms. The first NAPA implementation project (UNEP) also contributes to this effort by establishing a first extension of the early warning system to project sites in Khor Angar and Damerjog; there is currently no operating early warning system in the western region and hydro-climatic monitoring in the targeted areas remains limited.

In addition to the external resources channelled through the PIP, the Government also incurs expenditures in all major sectors through its implementation of the INDS. These expenditures include non-earmarked programmes in the sectors mentioned above along the major components of the INDS. For 2008-2012, national government expenditures to support all areas of the INDS totalled 198,415 million US\$.

This project builds on a number of key targeted projects and investments that provide a baseline for integration of resilience in the two regions, such as:

- the CERD-executed projects to develop a National Disaster Risk Assessment system, to promote the cultivation and dissemination of date-palm in rural areas, and to research and develop the potential for geothermal energy.
- the AfDB support program of support to the Ministry of Agriculture (MAEM-RH)
- the Arab Fund for Economic and Social Development's (FADES) support to the construction of new port facilities in Tadjourah
- the Islamic Development Bank's ongoing support to Urbanism, Land planning and Environment.

Additional details on baseline financing and in particular the extent to which the project will build on those baselines, their duration and respective budget and the articulation of this project's additional activities compared to the baseline programming is provided in the next section, and specifically under baseline description for each project component. As foreseen spending under the PIP and the next 4 years of national INDS expenses was not yet available at the time of writing, these figures will be confirmed during the project preparation phase.

B. 2. INCREMENTAL /ADDITIONAL COST REASONING: DESCRIBE THE INCREMENTAL (GEF TRUST FUND) OR ADDITIONAL (LDCF/SCCF) ACTIVITIES REQUESTED FOR GEF/LDCF/SCCF FINANCING AND THE ASSOCIATED GLOBAL ENVIRONMENTAL BENEFITS (GEF TRUST FUND) OR ASSOCIATED ADAPTATION BENEFITS (LDCF/SCCF) TO BE DELIVERED BY THE PROJECT:

B.2.1 CLIMATE CHANGE CHALLENGES

Djibouti's climate is characterized by arid tropical conditions, where both temperatures and evapotranspiration are high all year long. Djibouti receives annually 150 mm of precipitations, of which nearly 90% is lost to run-off and evaporation (mean annual evapotranspiration was estimated at 2000 mm annually). There are however episodes of sudden high precipitation, leading to flooding, and significant inter-annual variability in overall precipitation received. There are two distinct seasons, differentiated by mean temperatures: the "cool" season, with mean temperatures of between 20 and 30°C, and the "hot" season, with temperatures between 30 and 45 °C.¹¹

¹¹ Government of Djibouti, Initial National Communication to the UNFCCC, 2001

Increases in temperature, both inland and in coastal environments, are already being felt. Variations in the onset of rains have also been noted, along with an increase in the number of intense precipitation events, as in 2007 and early 2008 when delays in the onset of rains combined with insufficient precipitation during the season, caused a food security crisis. In 2008, estimates placed the population at risk of food insecurity at 284,000 people. (FEWSNET). Data analysis undertaken during the development of Djibouti's 1st National Communication showed a marked trend towards decreasing precipitation, with a decrease of 6 to 15% on all monitored stations between 1961 and 1990.

Djibouti is highly vulnerable to extreme climate events. The large part of Djibouti's infrastructure and population (88%)¹² is located in the coastal area, and is therefore particularly at risk from sea level rise and flooding, as illustrated by the events of 1927, 1989, 1994 and 2004, which resulted in significant loss of life and investment (for example, the 2004 event affected nearly 100,000 people caused 51 deaths, left 1500 people homeless and damaged the Wea bridge on the road to Ethiopia).

Climate scenarios indicate that there is a trend towards longer drought periods, as well as increased frequency and length of seasonal droughts, followed by an accentuation of rainfall peaks during wet years. Djibouti's First National Communication foresees a for 2050 temperature increase of 1,7 to 2,1oC and an overall rainfall decrease of 4 to 11%, combined with increased variability in precipitation regime. Overall, any decrease in precipitation is expected to slow down aquifer recharge rates.

Djibouti also faces climate change threats from sea level rise. According to the First National Communication, sea level rise could reach up to 39 cm by 2050 leading to significant erosion, potential damage to coastal and port infrastructure, as well as increased risks of flooding and salinization of water through salt water intrusion in depleted aquifers. The fragile ecosystems (wadis, oases, coral reefs, and mangroves) that play a key role in the subsistence of local communities are already showing significant signs of degradation due to climate change and anthropogenic pressures.

Climate change impacts are already being felt in all sites of the Central Plains, as follows:

- Tadjourah region is located on the northern coastal zone, at the extremity of the Gulf of Tadjourah. Its littoral is 1240 km², and home to both urban and semi-rural settlements. The area houses a port, commercial infrastructure, schools, a hospital and housing, as well as semi-permanent settlements, some large agricultural exploitations, touristic infrastructure and major roads. The zone is surrounded by wadi beds, where run-off waters reach the sea. These areas, sometimes unsustainably settled, are often flooded during rains, and have been demonstrating increased bank-side erosion due to stronger precipitation patterns and deforestation. In addition, sea level rise has led to some permanent saltwater intrusion into the wadi beds, which further prevents rainwater drainage during rainfall episodes, and leads to increased landward inundation (additionally, the stagnant waters create an unsustainable sanitation condition). This has already damaged some infrastructure in Tadjourah's newest neighbourhoods, including the destruction of the college wall. The port area, which is protected by a low dike, is also experiencing increased wave action and some seasonal inundation, rendering the infrastructure inaccessible. The main commercial road is sometimes already unusable or blocked during high tides, due to noted higher sea levels.

- The plain of Hanlé is located inland in the south-western part of the country and forms part of a series of geographic depressions that end in the Gulf of Tadjourah. The zone benefits from slightly higher levels of precipitation and there are indications that the aquifer could be recharged by the important Awash river in Ethiopia. Arable land in the area is also available in large quantities, but exploitation is limited

¹² Djibouti, Profil Côtier, PERSGA

due to lack of technical means. Soil cover, which is sparse, is consisted mostly of acacias, which are being gradually colonized by *Prosopis* (an invasive species) and damaged by recurrent droughts and excessive harvesting. The region has recently been subject to a combination of droughts, which have damaged the agro-pastoral exploitations in the region, followed by severe rainfall events leading to excessive flooding in wadi beds. This has led to the total destruction of some agricultural perimeters as well as crop and property losses, as well as the destruction of acacia stands, leading to gradual desertification. Out of the 180 created agricultural perimeters, only 70 remain operational today. This raises the question as to whether the paradigm of “agricultural perimeters” is adequate in ensuring resilience and what alternative innovative solutions can be found.

B.2.2 Problem the LDCF Project seeks to address and Expected Results

This project seeks to address urgent and immediate adaptation needs in the central plains of Djibouti, by implementing a set of concrete and innovative technologies. The project responds to the climate change induced vulnerabilities created by a modification of rainfall regimes (increased aridity coupled with increased flooding) and sea level rise (increased salinity coupled with increased inundation) already observed in project targeted areas. The project will implement a set of coordinated measures designed to promote ecosystem rehabilitation as a means of ensuring buffer ecosystems’ resilience (reefs, mangroves, oases) while removing the barriers to adaptation posed by unsustainable natural resource use practices and lack of institutional and policy capacity to cope with a changing climate identified as root cause of the vulnerability of the project targeted sites.

Positive expected adaptation related benefits of this project include:

- Reduced losses from flooding and inundation, leading to better security and quality of life, including environmental health
- Restored fragile productive ecosystems such as oases, plains, reefs and mangroves for increased agricultural and fisheries productivity as well as for protection against flooding and inundation
- Increased technical and scientific capacity for future, climate-based, development planning and for enforcement of norms and standards.

The project will be implemented in two distinct areas within the country’s Central plains: the coastal zone of Tadjourah and the inland plain of Hanlé, which form part of a geological continuum. These two areas offer distinct avenues for further testing of adaptation technologies, while helping to address urgent and immediate adaptation needs among the most vulnerable groups. An up scaling strategy to be developed under the project will help further sustain project interventions and develop means to expand the interventions to other sites of the country.

This project builds on healthy and realistic baseline development initiatives (see section B1.1 and B1.2) and practices owned by the government of Djibouti, which do not currently take into consideration the impacts of climate change in the targeted region. It seeks to provide additional knowledge and capacity that can help inform future planning and provide resilient pathways for land use. It also seeks to work with local communities to enhance their livelihoods where these need to be diversified (to provide added security) or modified (to provide added resilience). Finally, the project seeks to enhance ecosystem resilience as a basis for communities’ resistance to climate shocks. The project will use combine the ecosystem-based approach to adaptation, which consists in restoring the ecological services that promote resilience and productivity, with a set of targeted investments designed to address urgent physical adaptation needs. The project will also adapt new scientific evidence related to sustainable pastoralism, and advances in promoting resource efficiency in water usage, in finding technological solutions to the problems identified. This is in line with current practice on adaptation including the one applied in other similar projects implemented by UNEP and other agencies.

The project expects to achieve these benefits through the articulation of activities in four components, as follows:

Component 1 – Protection against water-related climate change hazards.

Baseline: Existing investments into infrastructure in the country, for example roads and construction are not taking climate change into consideration, and are not considering the potential risks posed by increased flooding, as can be seen from the ad hoc development in the city of Tadjourah. In the central inland plains, investments are focused on ensuring access to basic services and social development. Existing protective infrastructure is either outdated or insufficient to deal with added pressures, as can be seen from severe bank erosion in Tadjourah, as well as from the rapid disappearance of traditional flood control structures in the Hané region. This is compounded by a lack of enforcement capacity within the government authorities concerned with land use planning (at central and local level), and a lack of means for the construction of enhanced and resilient protective structures. In the central inland plains, investments are focused on ensuring access to basic services and social development (health, nutrition, education). Current efforts to support agricultural productivity are focused on the creation and operation of agricultural perimeters, the organization of farmer and herder associations, but without taking into consideration the potential impacts of floods and droughts. There is currently no operational early warning system in any of the two project sites, although an EWS system has been set up to operation around Djibouti city. There are little to no means of protection from floods in any of the two project areas, and where they exist they are severely degraded and insufficient to withstand future climate shocks.

Key projects forming the baseline for this component out of the baseline projects described in section B1.2 include the following:

- *Natural Disaster Risk Assessment and Monitoring System.* Executed by the CERD, with funding from the World Bank, this project runs until the end of 2012 and focuses on the renewal of public security and public safety planning, including natural disaster risk analysis and planning frameworks. This initiative provides an overarching (national) disaster risk management framework on which to build a more thorough knowledge of flood risks in the areas of Tadjourah and Hanlé. (910, 000 US\$).

- *The Tadjourah Port Project is an important infrastructure development initiative, executed by the Ministry of Finance, and funded from a loan from the Arab Fund for Environmental And Social Development.* The project will develop new infrastructure shipping facilities in Tadjourah, including offshore installations, infrastructure, buildings and equipments, and advisory services, including feasibility studies. In the short term (2012-2014), this project's grant component on advisory services (500,000 US\$) help create a baseline for Component 1 by providing data on coastal dynamics in the Tadjourah region, while in the long-term (2014-2020), the project will provide much needed infrastructure and economic development to the region (35 million US\$).

- *Support to Surface Water Mobilization Project, executed by the Ministry of Agriculture, Livestock, Fisheries and Water (MAEM-RH), with support from the African Development Bank (1.9 million Euros, to 2013).* This project includes a capacity development component for the Ministry which will provides baseline knowledge and data of water resources as well as technical capacity for water monitoring and mobilization within the Ministry of Agriculture responsible for Water (estimated at 750,000 US\$), as well as investments in areas adjacent to the project's targeted zones (Dikhil and Obock).

Additionality: Activities in this component are designed to respond to threats from climate change on water resources in the Central plains. These threats include particularly flooding, which is leading to consequent erosion, the disappearance of agricultural perimeters, and to losses of life and property. In

the area of Tadjourah, which is a coastal zone, the seasonal floods, as well as flash floods from severe precipitation events, are exacerbated by sea level rise; the conjunction of the two events sometimes leads to entire segments of Tadjourah city being surrounded by waters or inundated, with immediate consequences on populations well-being, productivity and health. The project will support the protection of 4km of shorelines through the installation or rehabilitation of protective structures, namely along wadi banks where water-induced erosion has led to the disappearance and siltation of existing gardens and agricultural perimeters (Hanlé), as well as flooding around housing, buildings, schools and roads (Tadjourah). To further reduce risks from flooding, the Early Warning System established by the first NAPA project in the north and south will be extended to the two project sites and a risk and feasibility assessment for wadi control will be completed. The project will also support, through this component, thorough scientific investigations and risks assessments on the hydrological potential of the inland plains, which has never been completed, and which creates a serious knowledge gap for any future water planning in the country.

Expected additional adaptation activities under this component include:

Tentative Activities	GEF RBM output	NAPA priority
Shoreline and riverbank rehabilitation to protect settlements and agricultural perimeters	1.2.1	1 ¹³ , 10
Protective works against wadi and sea flooding in Tadjourah and Hanlé	1.2.1	1, 10
Extension of the EWS against flooding in Tadjourah and Hanlé	2.1.2	1, 3
Identification, modeling and forecasting of hydrological potential of the southwestern aquifers in the face of CC	2.1.1	3,5,8
Climate risk assessment, feasibility and engineering studies for wadi flood control	2.1.1	10

Component 2: Ecosystem rehabilitation, recovery and resilience

Baseline: Fragile buffer ecosystems in Djibouti are suffering from the combination of climate variability and human pressures. Coral reefs are subject to degradation due to unsustainable navigation, fishing and tourism practices, leading to a degradation of potential barriers against tides, storms and sea level rise as well as to a decrease in fisheries productivity. Mangroves are also severely degraded along the coast. The first NAPA project seeks to rehabilitate and restore mangroves in the North and South, but in the central area of Tadjourah, mangrove stands have almost nearly disappeared, leaving the coastal area bare and subject to severe erosion. In the central plains, vegetative cover is also in danger from deforestation (for satisfying energy needs) and invasive species (*Prosopis*), which leads to soil erosion and accelerates wadi flows and flooding, and limits the replenishment of aquifers. Some initiatives are afoot to control invasive species including through the first NAPA implementation project supported by UNEP, while others are focused on replenishing soil cover, including the forthcoming Green Wall initiative, that foresees reforestation or afforestation along a stretch crossing the entire country. The IFAD-supported project PROMES GDT also supports targeted reforestation, and the management of the

¹³ Priority 1 in Djibouti's NAPA concerned adaptation in the coastal zone; the first NAPA project was dedicated entirely to addressing this priority; however due to lack of means it did not extend to the full coastal zone. Therefore this project also partly addresses priority 1.

Day forest is being supported by the French cooperation. However, these initiatives have not yet taken place in project sites, and the environmental degradation has led to further impoverishment of local communities. The project will therefore seek to build on government-funded INDS implementation programmes in the two project regions by building the resilience of those interventions which if left unattended will be not sustainable in the face of a changing climate. The total expenditures for INDS component 2-2 (Urban, Local, and Rural Development and the Environment) equaled 39 million US\$ over the period 2008-2012. These include government run programmes for land and habitat developed in the growing urban centers in all regions (including Tadjourah and Hanlé), environmental protection programming, urban planning, water and sanitation programmes. (A more accurate figure of ongoing government expenditures for the period of the project will be obtained during the PPG phase, based on figures to be provided by the Ministry of Finance during the revision of the INDS for 2013-2017.)

Additionality: The project will support resilient reforestation and afforestation, as well as a resilient restoration of vegetative cover along wadi banks in the two project sites as a complement to flood protection works, and as a means of enhancing the resilience of fragile systems. This is also intended to retain and slow down water flows during rain events, in order to promote aquifer recharge, and promote soil fertility in and around agricultural perimeters in Hanlé area. Species used will be selected among the most resilient and adapted species available locally. In the coastal area, the project will pilot technologies for pilot mangrove transplantation in order to restore previous mangrove strands and to increase coastal forest cover. This technology has been tested at a small scale in Djibouti, with promising results, but needs wider piloting before it can be successfully upscaled through baseline activities. Finally, the component will also support reef management and restoration, based on proven Ecological Restoration Methods, with the support of NGOs and the private sector. This will contribute directly to the re-establishment of fisheries in the region, as well as to the budding ecotourism industry. Overall, through this component the project will contribute to restoring 100 ha of vegetative cover in Hanlé area, 200 ha of mangroves and 2km² of reefs in the in coastal zones of Tadjourah.

Expected additional adaptation activities under this component include:

Tentative Activities	GEF RBM output	NAPA priority
Afforestation, reforestation and revegetation using adapted, resilient and productive species for anti-erosion control and flood protection in Hanlé region	1.2.1	5, 10,
Pilot mangrove transplantation for fisheries stimulation, sea level rise protection and coastal erosion prevention in Tadjourah region	1.2.1	7
Rehabilitation and sustainable management of coral reefs in Tadjourah Gulf in partnership with private sector	1.2.1	7

Component 3: Sustainable and Resilient Livelihoods

Baseline: As noted above, livelihoods in the central plains are subject to climate variability and are being further jeopardized by climate change. Most development efforts focus on ensuring the fulfillment of basic needs, including food and water, access to health and education services. Only a few initiatives consider future climate conditions in the implementation of their development strategies. However, failure to provide sustainable and resilient livelihoods could lead to migrations and conflicts. Furthermore, continued poverty leads to continued unsustainable natural resources use patterns such as deforestation, overpumping, or land clearing, in the end to achieve very low productivity, for lack of technical knowledge. These unsustainable land and water use patterns are creating barriers to resilience and adaptation that are not currently being addressed. Though a large number of baseline development investments are focused on livelihoods, a number of them are promoting what could be maladaptations

(for example the allocation of large tracts of land and subsidized water to private foreign operators for intense agriculture). The project will seek to build on ongoing baseline programming supported by the government through the INDS as well as the PIP, such as:

- Ongoing programming under the INDS for REDUCING EXTREME POVERTY, VULNERABILITY, AND INEQUALITY (28 million US\$ from 2008-2012, with updated and decentralized figures (as appropriate) to be provided by the Ministry of Finance. Although updated figures are still being developed within the Ministry of Finance and planning, similar levels of investment are expected for the next 4 years.
- The Project of Support to the Development of Date-Palm cultivation, which is executed by the CERD and the ministry of Agriculture through an Islamic Development Bank Grant (500,000 US\$), which provides a baseline of information, science and genetic material for the creation or re-habilitation of oasian ecosystems.
- The Geothermal Energy Development project in the Hanlé area, executed by the CERD, which provide a baseline of research on groundwater resources, infrastructure, as well as a much-needed growing energy supply for the two areas. This project, which has been ongoing since the 1970s, is gradually coming to fruition with the signature in 2007 of a production agreement with a Swedish Energy company. (estimated cost of research 500,000US\$).

Additionality: This project will focus targeted support towards the achievement of sustainable and resilient community livelihoods based on best available scientific and technical advice. The project will provide access to solar and wind energy for pumping and household needs as a means of reducing fuelwood use and therefore reducing deforestation, as well as facilitating reduced pumping rates. The project will also rehabilitate and upgrade at least 10 wells through water pumping and conservation structures, including water harvesting structures where feasible, in order to reduce over-pumping and to promote sustainable agriculture. Finally, the project will also pilot technologies for the rehabilitation of agricultural perimeters in at least 100 ha, using the principles of oasian agriculture and best available technologies (tiered cultivation, agro-forestry, pest and drought-resistant crops, drip irrigation), along with the introduction of alternative sources of livelihoods such as apiculture, mariculture and pisciculture, and ecotourism. In overall, this will have the purpose of reducing human pressures on natural systems, while providing opportunities for resilient local development.

Expected additional adaptation activities under this component include:

Tentative Activities	GEF RBM output	NAPA priority
Rehabilitation of water wells and dissemination of sustainable and efficient water extraction and conservation technologies	1.2.1	8, 9
Rehabilitation of agro-pastoral perimeters according to oasian agriculture and sustainable pastoralism principles, using locally adapted productive species	1.3.1	5
Introduction of alternative livelihoods (apiculture, fisheries and aquaculture, mariculture, ecotourism and crafts)	1.3.1	x

Component 4: Institutional capacity

Baseline: Despite efforts to step up activities in environmental management, pollution control, land use planning, there is still limited capacity in the country to undertake climate proof planning. Some ministries, for example the Ministry of Agriculture, are benefitting from significant support from partners and donors, enabling them to deliver part of their mandate and planned investments in the country. From an environmental perspective, however, land use and land use planning is still undertaken in an ad hoc manner, with little means, and subject to very little enforcement. As a result, investments and constructions are often made by private sector partners in a manner that fails to take climate risks into account. For example, schools and buildings have recently been constructed within the flood-prone area of a wadi bed in Tadjourah, leading to their immediate degradation when a severe rainfall event occurred (2010). Similarly, the lack of enforcement capacity means that developing tourism infrastructure are exerting undue pressure on fragile ecosystems, such as mangroves, reefs, and water resources. These issues are not currently being taken into consideration by any other initiative. The first NAPA project – currently at the early stages of implementation - is expected to contribute to the gradual building of capacity among stakeholders involved in coastal planning; it is also creating basic capacity for the operation of an early warning system and will support the training of local planners and stakeholders in sustainable land use planning. The project will build on the baseline of existing government capacity, infrastructure and personnel, including targeted capacity development initiatives such as the ongoing IDB grant support for Urbanism and Environment (220,000 US\$).

Additionality: The project will provide additional support to the local authorities for land use (urban) planning, including by performing risk assessments in both project sites, as well as through targeted training of city and regional officials. UNEP led PROVIA (Programme for Vulnerability Assessment) will guide the development of Vulnerability and Risk Assessment through the application of the newly developed tool on assessing vulnerability to climate change. Additional enforcement capacity will also be provided for the Land Use Directorate (Aménagement du Territoire) for ensuring that investments are subject to appropriate climate change considerations. This may include a revision of land allocation procedures, building codes and norms, strategic climate assessments, mainstreaming of new and innovative approaches and paradigms, and policy reform. An up scaling strategy will be developed by the project. The project will also work closely with the baseline activities to ensure that the baseline activities / projects pick up on successful results and upscale them, and also comply with the new norms. This fits well with UNEP’s “authority on environment” voice as well as strengths in leveraging partnerships to do this, while also strengthening the capacity of government itself to mainstream environment into the baseline. This will contribute towards the sustainability of the project interventions beyond projects lifetime.

Expected additional adaptation activities under this component include:

Tentative Activities	GEF RBM output	NAPA priority
Strengthening and stabilization of the environmental monitoring and enforcement system, including relevant policy revision, reforms and up scaling strategy.	1.1.1	x
Strengthening of district-level and local-level capacity and knowledge regarding adaptation	1.1.1	x

B.3. DESCRIBE THE SOCIOECONOMIC BENEFITS TO BE DELIVERED BY THE PROJECT AT THE NATIONAL AND LOCAL LEVELS, INCLUDING CONSIDERATION OF GENDER DIMENSIONS, AND HOW THESE WILL SUPPORT THE ACHIEVEMENT OF GLOBAL ENVIRONMENT BENEFITS(GEF TRUST FUND)

OR ADAPTATION BENEFITS (LDCF/SCCF). AS A BACKGROUND INFORMATION, READ [MAINSTREAMING GENDER AT THE GEF.](#)":

The project is being proposed for deployment in the areas of Tadjourah and Hanlé, two distinct and highly vulnerable areas of the countries that have yet to benefit from any significant investment in resilience promotion. While the Tadjourah area is due to see some increased economic development in the coming years with the achievement of some major infrastructure development projects, the poverty of its inhabitants and the degradation of the coastal environment makes it vulnerable to dual threats from maladapted economic development and the increased threats of climate change. This area has therefore been selected as an area of priority for LDCF programming because it has already been subject to climate change impacts (flooding and coastal erosion), and because there have yet to be any projects or programmes considering resilience in its urban or rural settlements.

The area of Hanlé presents acute vulnerability due to the extreme poverty of its residents, most of whom are recently settled or semi-nomadic populations whose livelihoods are entirely based on unpredictable precipitations, and very low agricultural productivity. Geothermal potential as well as the exploitation of salt from the Assal Lake nearby offer some prospects for broad economic development, but the region has yet to consider the impacts of climate change on its basic livelihoods. Severe flooding has already eroded the productive basis of the area, and drought and desertification create future threats as well. In order to ensure that the populations living in these areas can aspire to better livelihoods, investment from the LDCF to address urgent adaptation needs is required.

The expected socio-economic benefits arising from this project include:

- Reduced economic losses from floods, including from losses of infrastructure and agricultural land.
- Increased human security through flood protection
- Increased nutrition and livelihoods through alternative economic development pathways and increased agricultural productivity in oasian ecosystems
- Balanced development paradigm between farmers and pastoralists in the face of a changing climate
- Increased incomes and regional development perspectives from alternative economic development pathways
- Increased incomes from fisheries through the restoration of fragile marine ecosystems and from the introduction of mariculture
- Increased efficiency of current land use systems to increase social and economic benefits

Gender considerations will be mainstreamed throughout project activities and specific investments will be targeted towards women producers and female-headed households, particularly in terms of water management. It is expected that improvements in water conservation and infrastructure will provide benefits to women (by reducing water fetching and irrigation burdens). Similarly, activities that will target oasian production will ensure special consideration is given to women's plots – in accordance with local customs. A more specific and, where possible, quantifiable estimate of social and economic costs benefits expected from this project will be provided during the project preparation phase. This will include the development of gender-disaggregated indicators.

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

THAT ADDRESS THESE RISKS TO BE FURTHER DEVELOPED DURING THE PROJECT DESIGN:

The following risks have been identified as applicable to this project. A more thorough risk management strategy will be provided following project preparation:

Risk	Level	Mitigation
Socio-economic risks		
Communities faced with poverty could continue the unsustainable use of coastal resources	Low	The project would liaise closely with the baseline activities to encourage them to uptake successes and norms promoted by the project.
Environmental risks		
Extreme climate events such as floods and droughts could disrupt project activities and/or damage ecosystems and infrastructure	Medium	Coordination will be undertaken with partners active in early warning and disaster response in Djibouti in order to ensure that relief interventions are also directed towards project zones in the case of droughts or floods.
Project management risks		
Project could encounter delays due to the lack of nationally-available expertise and human resources	Medium	The project will establish a database of national and international experts likely to provide technical advice to the project. In addition, close linkages with co-financing partners and programmes will ensure availability of technical expertise. This project will also benefit from structures and mechanisms established for the first NAPA project including thorough the technical support provided from International expertise which will be delivered to increasing the national capacity .
Private sector investments along the coast could further accentuate ecosystem vulnerability.	Medium	Private sector investments are subject to Environmental Impact Assessments which are administered under the authority of the MHUEAT and who will ensure that investments are considered in light of their impacts on coastal vulnerability with no or minimum impact to environment. This project seeks to address gaps in the capacity for enforcement of existing standards as well as the strengthening of these norms.

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

Stakeholders to this project include all vulnerable sectors of Djiboutian society. Activities in this project will target vulnerable communities in both sites, as well as private sector stakeholders having an interest or investments in the central plains, local development actors (associations, NGOs and decentralized authorities) and the central administrations. Bilateral and multilateral development partners will also be associated to this project through co-financing and joint implementation of some project activities. During the inception period, a stakeholder engagement plan will be developed in order to ensure full consultation of vulnerable populations, in particular women, and as a tool to deploy more effective communications strategies throughout the project.

Rural communities: various vulnerability assessments undertaken during the preparatory phase and by other partners note a high degree of risk in terms of food security with heavy co-relation to precipitation amounts. On one hand, the population in Hanlé is comprised of semi-nomadic pastoralists who depend almost exclusively on the rare natural resources available in the region: pasture and rangelands, and small agricultural perimeters, constitute the main livelihoods. The slightest change in precipitation regime is likely to bring dire impacts in terms of access to potable water, loss of pasture, destruction of agricultural perimeters. These impacts are also intricately linked to one another, resulting in a cascade of negative impacts and an exacerbation of food insecurity.

On the coast, settlements are a little more developed, and communities are more stable, urban or semi-urban, yet remain at a high level of poverty and vulnerability. Tadjourah faces a number of risks due to the low water availability and bad water quality for human needs and for agriculture. Already among the lower income populations of the country, these communities could see their livelihoods disappear due to accelerated sea level rise and resulting salinization of groundwater. However, a number of opportunities for adaptation are present in the region that would allow for the simultaneous generation of environmental benefits and the promotion of resilient economic development.

Private sector: a number of stakeholders from the private sector are present in project sites, particularly on the coast, such as a number of touristic installations, private agricultural operators and factories.

Local and Central Administration: the various administrations have very few resources and capacity at the human, technical and financial levels to promote adaptation options in the country. This project will focus its capacity strengthening activities on institutions at the local and regional level (city council, regional authorities) as well as selected national-level institutions (Ministry of Urbanism, Habitat, Environment and Land Use) to address a key capacity gap in the enforcement of land use standards and policies. .

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

This project will be implemented jointly with the first NAPA project “Implementing NAPA priorities in fragile Coastal zones in Djibouti”, recently approved. This will help reduce execution costs and help continuing to build capacity among project partners.

The project will also pursue close coordination with other related initiatives in the targeted region and nationally, with a view of sharing information on adaptation technologies and best available means of achieving resilience. Specific projects and partners with which cooperation will be sought have been already identified, including:

- IFAD: supporting the implementation of a large-scale programme for sustainable land management and mobilization of surface waters, together with UNDP, FAO, WFP. (PROMES-GDT)

- Programme for the Rehabilitation of the Red Sea and the Gulf of Aden (PERSGA): a regional organization, the PERSGA promotes integrated coastal zone management and the protection of the marine environment. It has supported the development of the coastal zone profile for Djibouti, as well as capacity building initiatives in the region.
- The early warning system for Djibouti city coordinated by the CERD, which was established following the recent floods, and which benefited from EU and World Bank emergency support. (to be supplemented by the first NAPA project)
- Ongoing food security monitoring, supported by UNICEF, World Food Programme and the National Social Development Agency, which provides regular updates on the state of food security in rural areas including coastal zones, and which can be integrated into a multidisciplinary early warning system. Food security monitoring usually monitors climate factors as well as their impacts on social conditions.
- The project will build on UNEP DEPI's emerging Drylands Strategy which will have a strong emphasis on promoting new ways for sustainable pastoralism including with elements of resilience to climate change.
- The project will build strongly on the UNEP Adaptation Sub-programme focused on Ecosystem Based Adaptation which in addition to mountainous ecosystems has extended its focus to coastal ecosystems. More specifically the project will collaborate closely with the EU funded project (2.2 MUSD) which is expected to support the completion of vulnerability scenarios and cost-benefit analysis for EBA planning, capacity building for the development and implementation of integrated EBA in coastal and marine ecosystems, site-specific adaptation technology demonstrations and tools, and the development of approaches to support the integration of EBA into national planning frameworks. This will be considered as direct contribution of UNEP to this project.
- The promotion of sustainable fisheries and aquaculture and efforts to reduce illegal fisheries (MAEM-RH and FAO). This effort has been undertaken in an attempt to promote fisheries as a viable economic sector that would reduce pressures on land-based ecosystems, while providing sustainable livelihoods for communities.
- The ongoing water mobilization efforts and local rural development programmes ((MAEM-RH). As part of its mandate, and depending on resource availability, the Ministry undertakes works for water mobilization such as wells and boreholes, adductions and hydrogeological analyses.
- The GEF-supported creation of a network of Marine Protected Areas around the mangrove area.
- The forthcoming Grande Muraille Verte project (Great Green Wall Initiative), undertaken as part of national commitments to the NEPAD for combating desertification.

This project is expected to build alongside the first NAPA project, using similar mechanisms and institutions for steering and supervision. Joint execution and workplans will be developed for targeted activities to avoid duplication of administrative constraints and to reduce transaction costs and demands on the national executing partners. Specific coordination mechanisms will be further developed during the project preparation phase.

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

UNEP's work on climate change adaptation focuses on three main areas: (i) Science and Assessments, (ii) Knowledge and Policy Support, and (iii) Building the Resilience of Ecosystems for Adaptation. UNEP's credibility as a capacity builder, ecosystem manager and knowledge mobilizer is built through the

implementation of around 80 projects on adaptation at global, regional and national levels, spread worldwide.

The activities proposed under this proposed project cut across areas of UNEP's work on climate change adaptation. The project is consistent with UNEP's comparative advantage as identified through the GEF Council papers C.28/15 and C.31/5, including:

- Providing the GEF with a range of relevant experiences, a proof of concept, the testing of ideas, and the best available science and knowledge upon which it can base its investments
- Advancing knowledge for environmental decision-making through scientific and technical analyses, including environmental assessments and targeted research.

UNEP will bring to this project its experience on resources efficiency gathered through the DTIE (Division for Industry, Technology and Economics) which will be applied with regards to water use efficiency interventions. The project will also build on UNEP DEPI's emerging Drylands Strategy (until 2014) which will have a strong emphasis on promoting new ways for sustainable pastoralism. The majority of infrastructure work and restoration work can be linked and benefit from the Green Economy paradigm led by UNEP. The project will also benefit from ongoing programming within UNEP towards analyzing and documenting the ecological foundation of food security (to 2014), as well as from a contribution through the PROVIA programme, which provides insight on the economic assessment of ecological services, ecosystem-based adaptation and tools for urban and coastal planning. Finally, the project will also benefit from research and demonstration efforts undertaken within the UNEP led Integrated Marine & Coastal Environment and Resource Management project, which will aim to provide tools for integrated sustainable management of coastal zones and marine protected areas (to 2013). These UNEP-led initiatives provide additional co-financing to this project to a total of 1,76 million US\$ until 2014.

UNEP has gathered considerable experience in implementing projects and providing scientific guidance in the field of climate change. To date UNEP has facilitated the completion of 15 NAPAs and has assisted 38 countries in developing National Communications including studies on vulnerability assessments and adaptation measures. UNEP is also assisting LDCs and other developing countries towards implementation of the adaptation priorities identified by the NAPAs, National Communications and Technology Needs Assessments. It has also implemented or is in the process of implementing approximately 80 adaptation projects at global, regional and national levels. Through the implementation of those projects UNEP works to develop innovative solutions for national governments and local communities to adapt in an environmentally sound way to future climate change, through the provisions of methods and tools to support decision making, addressing barriers to implementation, and testing and demonstrating those solutions, as well as building climate resilience through restoration of key ecosystems (river basins, mountains, coasts and dry lands) vulnerable to climate change.

More specifically UNEP has gathered valuable scientific, technical and managerial experience through its adaptation work including numerous projects (GEF and non-GEF) with on-the-ground pilot demonstration components (e.g. Rwanda, Comoros, Djibouti, Cambodia, The Gambia, Tanzania, DRC, Burundi, Egypt, Eritrea, Ethiopia, Kenya, Rwanda, Sudan, etc.). This experience, along with UNEP's own technical work (through its regular programme of work), has strengthened the ability of UNEP to provide informed technical assistance to countries wishing to pilot innovative and integrated approaches for NAPA implementation. While not benefitting from in-country presence, UNEP works using a "direct" implementation modality through its Nairobi office, which is located in the region, as well through the services of expert technical advice who can be delegated to a specific country or

project. UNEP also has a regional coordination office for Africa, with a sub-office in Addis Ababa, who can provide assistance. Finally, Rio+20 has given UNEP a stronger mandate to work at the national level, although we continue to focus our attention on innovative projects.

Finally, UNEP has a long history of working with the Government of Djibouti on climate change issues, including through the development of the NAPA and implementation of the first NAPA project and national communications to the UNFCCC, as well as through regional partnerships, which greatly facilitates the delivery of quality project outputs in a cost effective manner through utilizing the capacities built and experiences gained so far. To date, UNEP has implemented 4 national projects in Djibouti including with GEF support, as well as 4 regional projects, and 2 global initiatives with components in Djibouti. This overall arrangement for this project fits well with “a stronger mandate to work at national level” given by Governments to UNEP at the Rio + 20. [Rio + 20, A/CONF.216/L.1].

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

The total amount of expected co-financing for this project is 22,080,000 US\$, based on a baseline comprised of ongoing and parallel national and international programmes. At the time of this revision UNEP mobilized co-financing, through contributions from other ongoing initiatives, totals 2,060 million US\$. Further possibilities will be explored during the PPG implementation.

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

The project contributes to the achievement of the three following outcomes of the UNEP’s Program of Work for 2010-2011 for Climate Change Adaptation: (a) the generation and mobilization of knowledge for adaptation including through impact and vulnerability assessment, the Global Adaptation Network and a World Research Programme on Impacts, Vulnerability and Adaptation; (b) support for capacity building, policy setting and planning; and (c) support for ecosystem-based adaptation.

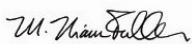
UNEP does not currently benefit from permanent staff based in Djibouti. Regular communication with the National Implementing partners have thus far provided the means for successful project delivery, including for the first NAPA project. Similar delivery modalities will be maintained for this project, and joint execution modalities will be developed so as to reduce transactions and demands on the implementing partners, while ensuring appropriate oversight and supervision. UNEP supervision modalities for all its projects are expected to be applied, providing for ongoing and regular monitoring and supervision as well as regular technical assistance.

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

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Dini Abdallah Omar	Director of Planning and Environment	Ministry of Environment	07/05/2011

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF/LDCF/SCCF policies and procedures and meets the GEF/LDCF/SCCF criteria for project identification and preparation.					
Agency Coordinator, Agency name	Signature	DATE (MM/dd/yyyy)	Project Contact Person	Telephone	Email Address
Maryam Niamir-Fuller; Director - UNEP-GEF Coordination Office.		08/25/ 2012	Ermira Fida, Portfolio Manager; UNEP-GEF Adaptation	+ (254-20) 762 3113	ermira.fida@unep.org