Planning and implementing Ecosystem based Adaptation (EbA) in Djibouti’s Dikhil and Tadjourah regions

Part I: Project Information

GEF ID
10180

Project Type
FSP

Type of Trust Fund
LDCF

CBIT/NGI
- ☐ CBIT
- ☐ NGI

Project Title
Planning and implementing Ecosystem based Adaptation (EbA) in Djibouti’s Dikhil and Tadjourah regions

Countries
Djibouti

Agency(ies)
UNEP

Other Executing Partner(s) **Executing Partner Type**

Other Executing Partner(s)
Ministry of Habitat, Urbanism, and Environment

Executing Partner Type
Government

GEF Focal Area
Climate Change

Taxonomy
Biodiversity, Biomes, Climate Change, Climate Change Adaptation, Focal Areas, Sustainable Land Management, Land Degradation, Land Degradation Neutrality, Private Sector, Type of Engagement, Civil Society, Stakeholders, Communications, Gender Mainstreaming, Gender Equality, Gender results areas, Food Security in Sub-Sahara Africa, Integrated Programs, Sustainable Cities, Capacity, Knowledge and Research, Knowledge Generation, Food Security, Land Productivity, Income Generating Activities, Community-Based Natural Resource Management, Sustainable Livelihoods, Sustainable Agriculture, Improved Soil and Water Management Techniques, Ecosystem Approach, Drought Mitigation, Wetlands, Least Developed Countries, Livelihoods, Mainstreaming adaptation, Climate resilience, Community-based adaptation, Ecosystem-based Adaptation, Beneficiaries, Participation, Information Dissemination, Consultation, Behavior change, Awareness Raising, Public Campaigns, SMEs, Community Based Organization, Academia, Local Communities, Access to benefits and services, Participation and leadership, Access and control over natural resources, Sex-disaggregated indicators, Women groups, Resilience to climate and shocks, Diversified Farming, Smallholder Farming, Gender Dimensions, Small and Medium Enterprises, Municipal waste management, Urban Resilience, Capacity Development, Training

Rio Markers

Climate Change Mitigation
Climate Change Mitigation 0

Climate Change Adaptation
Climate Change Adaptation 2

Duration
72 In Months

Agency Fee($)
847,875

Submission Date
4/16/2019

A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount($)	Co-Fin Amount($)
CCA-1	LDCF	8,325,000	11,525,000
CCA-3	LDCF	600,000	1,600,000
	Total Project Cost ($)	**8,925,000**	**13,125,000**

B. Indicative Project description summary

Project Objective

To increase the capacity of local communities in Gobaad Plain and Tadjourah Ville to adapt to climate change

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
1. Resilience to droughts in rural areas of Dikhil and Tadjourah	Investment	1. Increased resilience of local communities and ecosystems in Dikhil to the effects of climate change, particularly more frequent and severe droughts.	1.1 Multi-sectoral climate change risk and vulnerability assessment conducted in Dikhil region to guide land-use planning and the choice of adaptation interventions. 1.2 A regional adaptation plan developed for Dikhil region in a participatory way with local authorities 1.3 Based on the identified climate risk and vulnerability hotspots, community level land-use plans developed in a participatory fashion with local authorities and communities in Gobaad Plain 1.4 Hard infrastructure constructed – such as dams, boreholes and gabion walls in the wadi – to increase groundwater recharge and water availability in Gobaad Plain as well as to reduce soil erosion. 1.5 EbA interventions implemented to restore wadi banks in Gobaad Plain including the establishment of drought-resilient agropastoral plots, woodlots for the sustainable production of firewood, fodder and construction materials, drought-resilient agricultural practices such as water and soil conservation techniques, fodder production and processing methods, and Wadi ecological stabilisation. 1.6 Communities of Koudi-Koma, Lilya Bouri and Dinamali in Hanle Plain, Dikhil region supported through training and skills development to expand climate resilient	LDCF	4,000,000	7,325,000

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
2. Resilience to floods in Tadjourah Ville.	Investment	2. Increased resilience of local communities and ecosystems in Tadjourah region to the effects of climate change, particularly more frequent and severe floods and droughts.	2.1 Multi-sectoral climate change risk and vulnerability assessment conducted in Tadjourah region and city to guide land use planning and the choice of adaptation interventions. 2.2 Regional adaptation plan developed in a participatory fashion with local authorities and communities in Tadjourah region including a specific urban land-use/adaptation plan for Tadjourah ville to inform flood and drought-resilient settlement and conservation of wadi ecosystems. 2.3 Hard infrastructure constructed/rehabilitated – including canals and microdams – to protect Tadjourah Ville against floods in the wadis of Marsaki, Bodoli, Guittirou, Solali, Oylali and Ladinou to protect 28,000 people in Tadjourah Ville. 2.4 EbA interventions implemented to restore wadi banks in Tadjourah region including woodlots established for the sustainable production of firewood, fodder and construction materials, and wadi ecological stabilisation. 2.5 Communities of Ad Bouya, Darkenle, Kalaf, Sourat and Raysali in Tadjourah region supported through training and skills development to expand climate resilient livelihoods	LDCF	3,900,000	3,400,000

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
3. Knowledge and awareness-raising	Technical Assistance	3. Evidence-based knowledge, and awareness of local communities and government, on adaptation to climate change enhanced.	3.1 National and sub-national awareness-raising campaigns on adaptation to climate change in Djibouti undertaken. 3.2 Applied research and monitoring programmes on climate change adaptation established in partnership with national research institutions. 3.3. Policy briefs on EbA produced and presented to policy-makers and planners at national and sub-national levels during: i) NAP policy dialogues; ii) training workshops supporting Djibouti Vision 2035 strategy through SCAPE 1&2; and iii) national and regional stakeholder forums. 3.4 Sustainability strategy developed to enable continuation and up-scaling of project activities.	LDCF	600,000	1,600,000
				Sub Total ($)	**8,500,000**	**12,325,000**
Project Management Cost (PMC)						
				LDCF	425,000	800,000
				Sub Total($)	**425,000**	**800,000**

Project Management Cost (PMC)			
	Total Project Cost($)	**8,925,000**	**13,125,000**

C. Indicative sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
Donor Agency	European Union : Projet d'appui à la décentralisation, au renforcement du système local de gouvernance, et à la promotion du développement local inclusive	Grant	Investment mobilized	5,400,000
Donor Agency	European Union : Projet d'appui à la résilience des populations rurales	Grant	Investment mobilized	6,000,000
Donor Agency	International Fund for Agricultural Development (IFAD) : Programme for Water and Soil Management (PROGRES)	Grant	Investment mobilized	625,000
GEF Agency	UNEP : Global Adaptation Network (GAN)	Grant	Investment mobilized	100,000
Donor Agency	Green Climate Fund (GCF) : National Adaptation Plan (NAP)	Grant	Investment mobilized	800,000
Government	Dikhil Regional Authority	In-kind	Recurrent expenditures	100,000
Government	Tadjourah Regional Authority	In-kind	Recurrent expenditures	100,000
			Total Project Cost($)	**13,125,000**

Describe how any "Investment Mobilized" was identified

Investment mobilized come from four baseline projects identified and selected for their complementarity with the LDCF-4 project. They will be delivered under the grant form.

D. Indicative Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
UNEP	LDCF	Djibouti	Climate Change	NA	8,925,000	847,875	9,772,875
				Total GEF Resources($)	**8,925,000**	**847,875**	**9,772,875**

E. Project Preparation Grant (PPG)

PPG Required

☐

PPG Amount ($)

200,000

PPG Agency Fee ($)

19,000

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
UNEP	LDCF	Djibouti	Climate Change	NA	200,000	19,000	**219,000**
				Total Project Costs($)	**200,000**	**19,000**	**219,000**

Core Indicators

Indicator 3 Area of land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
0.00	0.00	0.00	0.00

Indicator 3.1 Area of degraded agricultural land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 3.2 Area of Forest and Forest Land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 3.3 Area of natural grass and shrublands restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 3.4 Area of wetlands (incl. estuaries, mangroves) restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female				
Male				
Total	0	0	0	0

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided

Targets included in the ‘Core Indicators and Metadata’ spreadsheet

Part II. Project Justification

1a. Project Description

A.1.1. The project problem, root causes and barriers that need to be addressed.

Djibouti is a small country of 23,180 km2, with a population of ~1 million people and a population growth rate of ~4.8% per year. More than 23% of this rapidly increasing population lives in extreme poverty[1][1] and 60% of the active population is unemployed. In this context, a large proportion of both rural and urban communities are reliant on the free goods and services derived from wadi ecosystems, to provide basic needs such as food, water and income. These goods include fuelwood, fodder and construction materials, while the services provided include soil stabilisation, water infiltration and protection from floods. This reliance on wadi ecosystems is particularly evident in rural communities of Dikhil region (including Hanle and Gobaad plains) as well as Tadjourah region (including Tadjourah ville and rural communities[2][2]). Both regions were selected because of their high levels of vulnerability to climate change linked to wadi ecosystem degradation and their good representativeness of the diversity of the Djiboutian context that includes both urban and rural as well as drought and flood-prone areas.

In both Dikhil and Tadjourah regions, which are located within the Ethiopian xeric grasslands and shrublands ecoregion[3][3], *Acacia* woodlands and oasis habitats are found within the wadi ecosystems. These ecosystems provide goods and services that underpin the livelihoods of the 207,306 inhabitants of both regions[4][4]. Because of ongoing unsustainable management practices, wadi ecosystems in both regions are rapidly becoming degraded. Causes of ecosystem degradation that are common to both these rural and urban areas include *inter alia*: i) wood extraction for domestic energy and construction; ii) invasion of *Prosopis chilensis* and other exotic tree species, which are negatively affecting agriculture and the survival of indigenous tree species[5][5]; and iii) over-extraction of groundwater for domestic, agricultural[6][6] and industrial[7][7] use, thereby decreasing groundwater supplies. This is threatening the livelihoods of local people in both areas.

In the rural area of Dikhil region including Gobaad Plain, extraction of woody plant material for energy, fodder and construction materials has in particular seriously degraded local ecosystems. Water shortages and the lack of vegetation in the rural landscape has also resulted in overgrazing along water points in the Gobaad wadi, the major wadi of this area. The resulting ecosystem degradation increases surface runoff and erosion. This, combined with reduced precipitation, has reduced water infiltration[8][8] rates and led to the depletion of surface and groundwater[9][9]. As a result, there is less water available, which inhibits agropastoral activities and reduces crop and stock productivity on the land in and around Gobaad Plain. Rural communities have responded to this increased scarcity of water by abandoning agricultural plots in this region. Historically, more than 300

agropastoralists established along the Gobaad wadi produced 600–700 tonnes of fruits and vegetables per year. Currently, less than 100 agropastoralists are living in the Gobaad wadi and there has been a resultant major decrease in agricultural production. The decreases in crop and stock productivity have led to alternative income-generating activities being increasingly adopted by local communities, particularly among young people. For example, the production of charcoal from *Prosopis* spp. as well as indigenous species such *Acacia* spp., *Salvadora persica* and *Tamarix nilotica*[10][10], is common and is contributing to further degradation of the Gobaad wadi. High levels of poverty[11][11] and population growth as well as the settlement of nomadic communities around the most reliable water sources further accentuate the pressures on the major wadi of Gobaad Plain.

In Tadjourah Ville counting now around 45,000 inhabitants, population growth – caused by the migration of individuals and families from surrounding rural areas – has resulted in an increased demand for natural resources, including land for settlement, construction materials and fuelwood. Urban expansion in this region is currently taking place without adequate development or implementation of land-use plans, and people are consequently settling in or near flood-prone wadis as these areas allow inhabitants to access water supplies. This unsustainable urban expansion is causing over-extraction of natural resources and subsequent degradation of peri-urban wadi ecosystems. This degradation, combined with changes in rainfall patterns, in particular more erratic rainfall, has led to the increased frequency and intensity of floods in the city. Such flooding negatively affects households as well as urban and peri-urban infrastructure in Tadjourah Ville[12][12]. Although the finalisation of a dyke in the Marsaki wadi in the course of 2019 will protect part of the city against floods[13][13], the upstream and downstream areas Tadjourah Ville remains highly vulnerable to flood events, namely Bodoli, Guittirou, Solali, Oylali and Ladinou wadis. The negative effects of the floods on communities and infrastructure are exacerbated by the inadequate drainage infrastructure, particularly around wadis in peri-urban areas of Tadjourah Ville. The temporary landfill of Tadjourah, located downstream of the Maraski wadi, on the edge of the sea has also been highlighted as an environmental risk adding a stress on the infrastructure, economy and population of Tadjourah especially in times of floods, which occurrence and intensity are expected to increase as a result of climate change[14][14].

Observed climate change has exacerbated the negative effects of ecosystem degradation in Dikhil and Tadjourah regions. There has, in particular, been an increase in the frequency and intensity of climate change related extreme events, including: i) drought and flooding events in rural areas such as the Dikhil region including Gobaad Plain[15][15]; and ii) flooding events in Tadjourah Ville combined to episodes of droughts in Tadjourah rural areas[16][16]. In addition, changes in temperature, total annual rainfall and seasonality of rains[17][17] have contributed to crop and stock yield decreases, damage to public and private infrastructure, and an increase in the degradation of ecosystems across both regions. Furthermore, by 2050, climate change models project: i) a 4–11% decrease in total annual precipitation with continued variability in rainfall seasonality; and ii) a 1.7–2.1°C increase in mean annual temperature[18][18]. The predicted effects of these climatic changes include: i) further flood damage to properties and economic infrastructure located in or near wadi beds as a result of increasing rainfall variability and surface runoff; ii) reduced soil fertility and increased sedimentation of rivers as a result of increasing soil erosion; iii) a decrease in water quality as a result of increasing salinity of groundwater; iv) limited water availability as a result of increasing surface runoff and decreasing groundwater recharge; and v) a decrease in biodiversity as a result of damage to natural habitats. With the expected decreases in precipitation and increases in mean annual temperatures, agricultural yields and the number of livelihood options in both rural and urban areas are predicted to decrease further.

To reduce poverty and improve livelihood conditions in rural and urban areas, the government of Djibouti adopted the 'Djibouti Vision 2035 strategy' in 2014.[19][19] . The overarching goal of the vision is to triple income per capita and reduce poverty by one third by 2035, as well as to improve access to water, jobs and other social services. The 'Strategy of Accelerated Growth and Promotion of Employment' (SCAPE, 2015-2019) is the first operational deployment for Vision 2035; it aims to accelerate the economic growth rate in Djibouti, thereby promoting employment and reducing social and regional disparities. This strategy, which ends in 2019, will be renewed for another five years (2020-2025). It is also complemented by a new initiative supported by the European Union, 'Projet d'appui à la décentralisation, au renforcement du système local de gouvernance et à la promotion du développement local inclusive' (hereafter referred to as 'Projet d'Appui a la Decentralisation'). Both SCAPE 1&2 and Projet d'Appui a la Decentralisation support the decentralisation process in Djibouti by building capacities among regional authorities to oversee urban and territorial development, land management and climate-resilient development at the regional level. In addition to these initiatives, the government launched the National Adaptation Plan (NAP) process in 2015 through the NAP Global Support Programme (NAP-GSP). Under this programme, representatives of sectoral ministries have been trained on the mainstreaming of climate change adaptation into national and sectoral plans. Djibouti's NAP[20][20] has also been finalised and submitted to the Green Climate Fund (GCF) to continue strengthening adaptive capacities within national institutions. There is, however, a considerable scientific knowledge gap in climate change risk assessments in Djibouti. Such evidence-based knowledge is required to support the mainstreaming of adaptation into national, regional and local policies, and in turn reduce the vulnerability of local communities to climate change. Moreover, there is currently limited capacity and awareness among central and decentralised government and communities to prioritise, support and implement climate change adaptation.

The **problem that the proposed LDCF project seeks to address** is that urban and rural communities in Djibouti are vulnerable to the impacts of climate change. The vulnerability of these communities to climate change is increased by: i) the degradation of wadi ecosystems and consequent reduction in goods and services; and ii) limited evidence-based knowledge of climate change impacts and cost-effective adaptation options in Djibouti. These factors are part of a vicious cycle operating within Djibouti, in which unsustainable land management practices – including over-harvesting of wood and unplanned urban expansion – cause degradation of wadi ecosystems. This degradation causes a reduction in goods and services from these ecosystems, which in turn: i) increases the vulnerability of nearby communities to floods and droughts; ii) reduces agricultural production; and iii) threatens livelihoods. Finally, these negative effects lead back to an increased intensity of unsustainable land management practices. Currently, communities and government do not have the capacity or knowledge to implement adaptation interventions that will break this vicious cycle.

The **preferred solution** is to strengthen the capacity of communities and government in Djibouti to plan and implement adaptation strategies that maintain functional wadi ecosystems and decrease the climate vulnerability of local communities to climate change. This ecosystem-based approach to adaptation and flood-risk management should be complemented by rigorous research and monitoring programmes to generate evidence-based knowledge, and awareness, of ecosystem-based adaptation (EbA) that can be shared with national and sub-national policy-makers and planners and integrated into development plans. The result of this will be to break the above-described vicious cycle and replacing it with a virtuous cycle of restored ecosystem function leading to climate-resilient livelihoods; this would allow for the sustainable use of natural resources, which in turn would contribute to the maintenance of ecosystem function.

There are, however, several **barriers** to achieving the preferred solution. These barriers include limited: i) technical and financial capacity within the government of Djibouti especially at local level to plan and implement EbA and other climate change adaptation interventions; ii) understanding and awareness of climate change threats and adaptation solutions within regional and municipal authorities and vulnerable communities reliant on the services provided by wadi ecosystems; and iii) data and information on climate change available for communities and governments to inform evidence-based decision-making, particularly at the regional and local levels.

A.1.2. The baseline scenario and associated baseline projects

Basesine situation

Under the baseline scenario, wadi ecosystems in Djibouti will continue to be degraded, increasing the vulnerability of local communities to climate change. In the rural Gobaad Plain, ongoing degradation of Gobaad wadi[21][21] will continue to have a negative effect on crop yields and livestock production through decreasing water availability and soil quality, as well as more frequent and severe floods. Alternative economic activities such as wood extraction will also increase the pressure on these ecosystems and further reduce agricultural productivity. Furthermore, a rapidly growing population[22][22] in Tadjourah Ville will continue to place pressure on infrastructure that delivers basic services and protects urban communities from natural disasters such as floods[23][23]. Unsustainable land management practices in watersheds of rural and peri-urban areas surrounding Tadjourah Ville – particularly on wadi banks – will contribute to the ongoing degradation of wadi ecosystems that provide important services such as flood mitigation, water infiltration and soil stabilisation. In addition, population growth and increasing settlement around the peri-urban wadi in Tadjourah Ville will continue to place unsustainable pressure on wadi ecosystems.

Various projects are currently being implemented to address socio-economic and environmental problems in Gobaad Plain and Tadjourah Ville through: i) improving the management of ecosystems that underpin the well-being and livelihoods of communities; ii) improving livelihood conditions and access to natural resources in both regions; and iii) constructing infrastructure that contributes to service delivery and protection from natural disasters. However, most of these do not consider the effects of climate change, including more frequent and severe floods and droughts, and they are consequently at risk of being undermined by the effects of climate change in the future. Projects that do consider climate change are implementing interventions only in localised areas as a result of budget constraints. Consequently, communities living in areas that are not targeted by such projects will remain vulnerable to the effects of climate change under the business-as-usual scenario. Additionally, most of these projects – except the LDCF 1[24][24] and LDCF 2[25][25] projects – do not explicitly focus on increasing community resilience to climate change through EbA.

Initiated in 2014, the LDCF 2 project uses a combination of Ecosystem-based Adaptation (EbA) and hard infrastructure interventions supported by institutional and capacity development activities to reduce the climate vulnerability of local communities living in the Hanlé Plains of Dikhil Region and in the inland plains and coast of Tadjourah Region (hereafter referred to as Hanlé and Tadjourah). Targeted communities include in Dikhil: Koudi Koma, Lylia Bouri and Dinamali for a total estimated population of around 500 people and in Tadjourah: Kalaf, Ad Bouya, Darkenlem Sourat and Raysali with a total estimated population of around 1700 people. Activities implemented by the LDCF 2 are very similar to the ones introduced in this project making synergies and exchange of experiences a key to success. Activities conducted by this project will therefore build on, sustain and expand the interventions of the LDCF 2 project.

Co-financing investments

The proposed LDCF project will build on four primary baseline projects that share a common focus on improving the livelihoods of agropastoral and urban communities at the regional and local level in Djibouti. It will in particular address the barrier facing the baseline projects of limited evidence-based information for ecosystem-based approaches to climate change adaptation. For a more comprehensive description of the proposed LDCF project activities, and how these will build on the baseline projects, see Section A.1.4. The co-financing amounts provided by the baseline projects are based on consultations with relevant stakeholders including a representative of the Water Administration, a representative of the Finance Department and the mayor in Dikhil and Tadjourah. These amounts will be validated during the PPG phase.

The **Programme for Water and Soil Management** (PROGRES) has started in 2017 with a lifespan of 7 years. PROGRES aims to improve livelihood conditions and reduce poverty among rural agropastoral communities in Arta, Dikhil and Tadjourah. It is funded by IFAD and the Ministry of Agriculture, Water, Fisheries and Livestock (MAEPE-RH)

will be responsible for project implementation over its seven-year duration. The programme will contribute to improving access to water resources, improving land management and reducing climate change-related risks in the three target regions using a combination of investments in hard infrastructure and ecosystem restoration. Component 1 of the PROGRES will: i) implement capacity-building activities for local planning and management; ii) build infrastructure to improve access and management of water resources; and iii) implement programmes for the reforestation and protection of vegetation in strategic areas[26][26]. In Gobaad Plain, PROGRES' activities will focus on improving access to surface water through the rehabilitation or construction of water tanks and wells and the construction of water retention infrastructure. The budget for these activities is US$950,766 of which US$625,000 will be considered as co-financing for the proposed LDCF project.

The proposed LDCF project will build on and complement PROGRES' activities in Gobaad Plain in several ways. EbA interventions will be implemented in selected sites where PROGRES is investing in hard infrastructures; at these sites the added value of EbA in terms of reduced climate change vulnerability will be documented. Interventions will include reforestation along the wadi banks to improve groundwater recharge[27][27] and gabion walls to reduce erosion and subsequent sedimentation downstream. These interventions, amongst others, will reduce the impact of both floods and droughts on livelihoods and economic activities, particularly agricultural production. The Outputs of the proposed LDCF project under Component 1 will improve livelihood conditions of agropastoralists in Gobaad Plain, thus improving the enabling environment for the development of sustainable agricultural activities and climate-resilient livelihoods, as promoted in PROGRES.

The **Projet d'appui à la resilience des populations rurales** – project **Re.Pro.Va**.[28][28] – will be implemented for a period of 5 years (2017-2022). It is funded by the European Union under the 11th European Development Fund and implemented by the FAO and the Ministry of Agriculture, Livestock, Fishery and Water (Ministère de l'Agriculture, l'Elevage, la Peche et l'Eau – MAEPE). The overall goal is to increase the resilience of rural populations to drought and climate change by enhancing the livelihoods of agropastoral populations in the five regions of Djibouti, namely Tadjourah, Ali-Sabieh, Dikhil, Obok and Arta. Specifically, the project aims to improve access to water in rural areas, to improve food diversification, to diversify households' income sources for vulnerable rural communities as well as to strengthen the prevention of malnutrition by targeting pregnant women and children under five. To achieve the expected objectives, the project will finance: (i) the construction and rehabilitation of hydraulic infrastructures (micro-dams, reservoirs, agro-pastoral wells, underground cisterns, water supply, boreholes and other structures); (ii) development of agro-pastoral areas; (iii) breeding activities for short-cycle species and agricultural production; (iv) activities to prevent and treat malnutrition at the community level; (v) awareness raising and training activities in agricultural production and nutrition. In order to ensure the provision of support at the local level, the FAO will assist MAEPE in establishing decentralised extension officers to work with local authorities, cooperatives and rural organisations and strengthen agricultural productivity. The project will be implemented over a five-year period and will cover the rural and peri-urban areas of the five regions of the country including Dikhil region which cover Gobaas Plain. The final beneficiaries of the project are the agropastoral populations, women and children living in the interior regions of the country. The total budget for these activities is US$ 30,286,000 (27,000,000 EUR) of which US$ 6,000,000 will be considered as co-financing for the proposed LDCF project.

Components 1 and 3 of the proposed LDCF project will build on and complement the activities of Re.Pro.Va. The implementation of EbA to support climate-resilient agropastoral and development activities in rural areas of Djibouti (Gobaad Plain) will complement the approach of the Re-Pro.Va project and complement its action. Ecosystems restoration and management conducted under the LDCF project will demonstrate the benefits of such interventions on local development such as the improved access to water for climate-resilient agropastoral activities, enhanced productivity, and improved livelihoods under climate change conditions. These interventions will contribute to climate-resilient development in Gobaad Plain. Benefits will be monitored and lessons learned compiled to inform policies and development processes in the region of Dikhil. The regional authorities in Gobaad Plain will also be able to use this information for policy revision and development planning. These interventions and good practices will also be scalable and replicable in other rural regions of Djibouti, as Re.Pro.Va. is building the capacities of agropastoral communities across the country.

The European Union is funding **Projet d'appui à la décentralisation, au renforcement du système local de gouvernance, et à la promotion du développement local inclusive – Projet d'Appui à la Décentralisation**[29], will be implemented from 2019 to 2024. To support this initiative aligned with SCAPE 1&2, the E.U. and the GoD have signed an agreement at the beginning of 2019; the E.U. will support the decentralisation process in Djibouti through a funding of US$ 13,500,000 of which 5,400,000 usd will be considered as co-financing of the proposed LDCF project. Projet d'Appui a la Decentralisation and SCAPE 1&2 both support 'Djibouti Vision 2035 strategy', adopted in 2014, with the aim to strengthen de decentralisation process in Djibouti, reduce poverty and improve livelihood conditions in rural and urban areas.

The **GCF NAP proposal** developed by UNDP and the MHUE under the readiness and preparatory programme aims to mainstream climate change adaptation into Djibouti's planning and budgeting processes. The GCF NAP proposal is built around three main components: (i) facilitating medium- and long-term adaptation planning by strengthening the coordinating mechanisms and identifying SCAPE adaptation response measures; (ii) climate-proofing SCAPE through the development and piloting of planning and budgeting guidelines at national and regional levels; (iii) strengthening M&E and reporting mechanisms for CCA to track the effectiveness of climate actions and financing. The project implementation should starts in 2020 and the following activities will be considered as co-financing for the LDCF project for a total amount of 800,000 usd:

- Activity 1.2.1: Evaluate the gendered impacts of climate change in the sectors of agriculture (oasis agriculture), livestock (nomadic livestock farming), tourism and coastal zones, and propose an action plan
- Activity 1.2.2: Conduct climate risks and vulnerability assessments in the sectors of agriculture (oasis agriculture), livestock (nomadic livestock farming), tourism and coastal zones
- Activity 1.2.3: Identify and prioritize adaptation options in the sectors of agriculture, livestock, fishery, water resources, tourism and coastal zones based on updated climate scenarios in the medium- and long-term
- Activity 2.2.1: Support the integration of CCA into regional planning, consistent with local priorities
- Activity 2.2.2: Support the integration of CCA into budgeting, consistent with local priorities

All three Components of the proposed LDCF project will build on the activities of SCAPE and Projet d'Appui a la Decentralisation and, more broadly, Djibouti Vision 2035 strategy. The capacity building process initiated among local institutions by SCAPE and continued through the above-mentioned E.U. initiative will enable the use of evidence-based knowledge on climate change risks, and best-practice adaptation options, generated through the three Components of this proposed LDCF project. The implementation of EbA combined with hard infrastructure to support climate-resilient agropastoral and development activities in urban and rural areas of Djibouti – implemented under Components 1 and 2 of the proposed project – will demonstrate the benefits of such interventions on local development such as the improved access to water for climate-resilient agropastoral activities and the reduction of flood impacts on infrastructure. These interventions will contribute to climate-resilient development in Gobaad Plain and Tadjourah Ville. Benefits will be monitored and lessons learned compiled to inform policies and development processes in both regions. The regional authorities in Gobaad Plain and Tadjourah Ville, which capacities would have been strengthened through SCAPE and Projet d'Appui a la Decentralisation, will be able to use this information for policy revision and development planning. These interventions will also be replicable in other urban and rural regions of Djibouti, as Projet d'Appui a la Decentralisation is building the capacities of regional authorities across the country. Finally, under Component 3 of the proposed LDCF project, evidence-based information of climate change impacts and best-practice adaptation options will be generated to inform the development of regional policies in and beyond the targeted regions.

UN Environment - The Global Adaptation Network (GAN) is a Knowledge-Sharing Platform for Climate Adaptation. The Global Adaptation Network (GAN) is helping the world to build resilience towards climate change by spreading adaptation knowledge and contributing with $100,000 quoted as co-financing. GAN currently works closely with

regional networks such as the APAN in the Asia Pacific region, REGATTA in the Latin America and Caribbean region and AAKNET in Africa. GAN also partners with regional partners such as EcoAdapt and the United States Environmental Protection Agency (USEPA), that in turn provide adaptation knowledge and services while promoting collaboration in their respective regions. This Platform will be useful for sharing lessons learnt and best practices produced by the proposed project and will contribute towards a global understanding of best practice adaptation in an LDC context and will potentiate replication initiatives elsewhere in the country or even locations with similarities.

Finally, local authorities of both Tadjourah and Dikhil region will contribute through in-kind co-financing of 100,000 usd each to the success of project implementation by devoting some staff time and office space to support adaptation planning at the regional level and facilitate on-the-ground activities. Amounts and breakdown will be confirmed and detailed during the PPG phase.

Lessons learned from past initiatives

In addition to this, the proposed LDCF project will build on the lessons learned from the following past initiatives:

- The **Lower Awash-Lake Abbé Land and Seascape – Enhancing Biodiversity Conservation in Transboundary Ecosystems and Seascapes Project** (LAALS) will provide new knowledge and lessons learned on the protection and rehabilitation of marine and coastal ecosystems, relevant for Tadjourah Ville.
- The Intergovernmental Authority on Development's (IGAD) **Programme of the Regional Fund for Strengthening Drought Resilience in the Horn of Africa (PRFSDR)** generated best practices and information on cost-effectiveness to inform the proposed LDCF project on best options for the creation of drought resilient agropastoral plots in Gobaad Plain.
- The **Securing Pastoral Systems Project** (PSSP) under the Supporting Horn of African Resilience (SHARE) will provide lessons learned on the cost-effectiveness of different measures to buffer livelihood against climate change and variability relevant for the creation of drought resilient agropastoral plots in Gobaad Plain.
- The **Programme to Reduce Vulnerability in Coastal Fishing Areas** (PRAREV) contributes to build institutional capacity in Tadjourah to mainstream adaptation in development plans. This will facilitate the integration of the evidence-based knowledge on climate change risks and adaptation options – generated by the proposed LDCF project – into regional policies.
- **Implementing NAPA priority interventions to build resilience in the most vulnerable coastal zones in Djibouti** project (LDCF 1) has generated lessons learned to inform the implementation of proposed interventions in Gobaad Plain and peri-urban areas of Tadjourah Ville.
- The proposed LDCF project will build on the progress made through **Supporting rural community adaptation to climate change in mountain regions of Djibouti** project (LDCF 3) and complement livelihood diversification activities.
- **Projet de Développement Rural Communautaire et Mobilisation des Eaux** (PRODERMO 1) generated lessons learned on water management as well as best practices for agropastoral techniques and infrastructure design, which will be used to inform the interventions and implementation of the proposed LDCF project.
- The **Rural Livelihoods Adaptation to Climate Change in the Horn of Africa (RLACC)** programme has lessons learned on adaptation technologies – including technical protocols – and community engagement that will guide the interventions and implementation of the proposed LDCF project.
- The proposed LDCF project will used the lessons learned, tools and protocols on the creation of drought resilient agropastoral plots generated through the project **Developing Agro-Pastoral Shade Gardens as an Adaptation Strategy for Poor Rural Communities in Djibouti**, funded through the Adaptation Fund.

A.1.3. The proposed alternative scenario, with a brief description of expected outcomes and components of the project

In the alternative scenario, the proposed LDCF project will support local authorities to assess their climate risk and analyse their vulnerability to plan for adaptation at the regional and municipal level. The project will then support the implement of a combination of complementary adaptation technologies identified in the regional and municipal plans developed – including EbA, hard infrastructure and climate-resilient agricultural practices – to restore wadi ecosystems and reduce flood-related risks and the vulnerability of communities to climate change in Dikhil and Tadjourah regions. Combined investments in hard infrastructure and ecosystems restoration, which has been proven as a cost-effective means of adapting to climate change[30][30],[31][31], will enhance the resilience of communities to droughts in rural areas including Gobaad Plain (caused by increasing temperatures and reduced rainfall) and floods in Tadjourah Ville (caused by increasingly erratic rainfall). This integrated ecosystem-based approach to adaptation will be complemented by additional activities, including the promotion of alternative economic activities in Gobaad, the establishment of woodlots and the development of city adaptation plan in Tadjourah, which will combat baseline causes of ecosystem degradation. The proposed interventions will contribute to avoiding climate change-induced internal displacement and migration by safeguarding natural resources such as fodder and water. In addition, the proposed LDCF project will build capacities of the local authorities to assess climate risk and vulnerability and plan for adaptation at the regional and municipal level based on the experience of Tadjourah and Dikhil. Finally, the project will establish long-term research and monitoring programmes in partnership with national and international research institutions. These programmes will generate evidence-based knowledge of EbA that can be integrated into development planning processes such as current and future initiatives that aim to operationalise Djibouti Vision 2035 strategy and the NAP.

By implementing the interventions described above, the proposed LDCF project will contribute to 3 National NAPA priorities, namely:

- Priority 3 – Implementation of restoration and management actions adapted to surface water;
- Priority 4 – Improvement of rangeland management to mitigate the risks associated with traditional extensive livestock; and
- Priority 5 – Promotion of the integrated agro-pastoral industry and the development of irrigation techniques to control the salinisation of soils.

The proposed LDCF project consists of three major Components, described below. The adaptation scenario funded by LDCF resources is presented in Section A.1.4.

Component 1: Resilience to droughts in rural areas of Dikhil region.

Under Component 1, the process of developing a regional climate risk and vulnerability assessment to identify climate risk and vulnerability hotspots, guide land use planning and the choice of adaptation interventions, together with the participatory adaptation planning exercise that will follow will improve planning capacity of both local authorities and communities and widen understanding of climate change threats and solutions in the Dikhil region. Adaptation measures against droughts and floods will be implemented to increase the resilience of local agropastoral communities living in rural areas of Dikhil to the effects of climate change. In those regions, rural communities are abandoning agricultural plots because of water scarcity and reduced agricultural productivity[32][32]. The proposed project will improve access to water and reduce displacement of the local population through a combination of hard and soft solutions. Through the project interventions, livelihoods will be improved as crop and fodder yields from agropastoral activities increase and additional economic activities are promoted; this will in turn reduce the expansion of activities that are harmful to the environment such as wood extraction and overgrazing, and will decrease pressure on the local populations to migrate. To further reduce pressures on wadi ecosystem, woodlots will be established in Goobad plain and the

use of *Prosopis spp*. and/or other species as appropriate as alternative source of energy promoted[33][33] to reduce degradation of natural woodland. Component 1 will comprise the following activities in the Gobaad plain:

· conducting a multi-sectoral climate risk and vulnerability assessment for the region of Dikhil to identify the specific impacts of climate change on wadi and adaptation options in Dikhil rural areas including Gobaad Plain;

· engaging in a participatory planning process with local authorities and communities of Dikhil to consider the findings of the climate risk and vulnerability assessment and to develop a corresponding regional adaptation plan as well as community land-use plans in climate risk and vulnerability hotspots to frame future development initiatives and adaptation interventions – including those promoted under the proposed LDCF project;

· based on the climate risk and vulnerability assessment, constructing hard infrastructure and regional adaptation plan and community land-use plans – including gabion walls, boreholes and rainwater tanks – to reduce soil erosion and increase groundwater recharge and water availability in Gobaad Plain. Two-to-four boreholes will be constructed or rehabilitated to provide water for agropastoral families in Gobaad[34][34];

· rehabilitating existing agropastoral plots– or establishing new plots – near the boreholes established by the project and providing cultivation protocols, planting and fencing materials, and appropriate species for cultivation in the plots. Each agropastoral plot will cover 8 to 10 ha, will benefit~50 families, and will also include grazing areas to reduce pressures on the wadi banks;

· providing training and equipment to support climate-resilient economic activities, including for example equipment for poultry raising and small solar-powered cold storage for goat milk for women's cooperatives or small businesses in Gobaad;

· establishing 4 tree nurseries and restoring at least ~200 ha of *Acacia* woodlands and oasis habitats in the watershed of Gobaad Plain – particularly on wadi banks – using drought- and flood-resilient species. These woodlands will also serve to protect the agropastoral plots, established by the project, against strong winds and sand storms;

· establishing tree nurseries and establishing woodlots of useful tree species adjacent to the restored area that provides non-timber forest products (NTFPs) – particularly fodder, fuelwood and construction materials – for local communities. Either one large (10 ha) woodlot per beneficiary community or 5 individual or communal woodlots (10m x 10m) in each beneficiary community will be established[35][35];

· promoting the use of invasive *Prosopis spp.* and/or other relevant species as appropriate as an alternative source of energy in Dikhil rural communities;

· providing training for local communities on drought-resilient agricultural techniques, including EbA to restore wadi banks, agroforestry, sustainable fodder production, best-practice irrigation and soil conservation, sustainable use of NTFPs and maintaining restored areas; and

· supporting existing initiatives to promote local market development/micro, small and medium enterprises (MSMEs) (e.g. the Agropastoral Cooperative of Gobaad; IFAD initiatives implemented through several projects – see Section A.5; and SCAPE), by providing equipment and training to diversify and enhance livelihoods of local communities living in Gobaad Plain.

In parallel to the interventions that will be implemented in the Gobaad plain, some follow-up activities on training and skills development and EbA investments will be conducted in the hanle Plain (Dikhil) currently targeted by the ongoing LDCF project: Implementing adaptation technologies in fragile ecosystems of Djibouti's central plains (referred in this PIF as LDCF 2). Those additional activities aim at supporting the long-term sustainability and impact of the LDCF 2 project beyond its closure. To promote continuity of interventions as well as sharing of experiences between both projects, the following activities will be implemented in 3 communities of Dikhil (Lilya Bouri, Koudi-Koma and Dinamali)

- Training on climate-resilient agriculture
- Training on alternative climate-resilient livelihood activities including aviculture and small business
- Support and capacity building of established committees and cooperatives
- Maintenance of established infrastructure (boreholes, irrigation systems and agricultural plots)
- Protection and restoration of key ecosystems (acacia and mangrove)
- Awareness-raising on the importance of key ecosystems for climate change adaptation

Component 2: Resilience to floods in Tadjourah Ville.

Within this Component, the process of developing the regional multi-sectoral climate risk and vulnerability assessment to guide land use planning and the choice of adaptation interventions, and the participatory planning exercises both at regional and municipality levels that will follow will improve planning capacity and widen understanding of climate change threats and solutions among the local authorities and communities. Adaptation measures will be implemented in urban and peri-urban areas of Tadjourah Ville to increase the resilience of local communities to the effects of climate change, particularly more frequent and severe floods. EbA will be combined with small-scale grey infrastructure to reduce flood-related risk in the city. These adaptation technologies, including EbA, will also restore and maintain the goods and services provided by wadi ecosystems in this urban environment. Component 2 will comprise the following activities:

- conducting a regional multi-sectoral climate risk and vulnerability assessment to identify climate change impacts on wadis, communities and infrastructure and adaptation options in Tadjourah region;
- engaging in a participatory planning process with the regional authorities, municipality and communities to consider the findings of the climate risk and vulnerability assessment and to develop a corresponding regional land use/adaptation plan to frame the adaptation interventions;
- developing city adaptation plan that regulate climate-resilient settlement and wadi management;
- rehabilitating/strengthening/constructing small-scale grey infrastructure – including gabion walls, canals and microdams – to protect Tadjourah Ville against floods in the wadis of Marsaki, Bodoli, Guittirou, Solali, Oylali and Ladinou;
- establishing 4 tree nurseries and implementing EbA to restore ~200 ha of Acacia woodlands and oasis ecosystems in the peri-urban watershed of Tadjourah Ville – particularly on the banks of the Marsakik, Bodoli, Guittirou, Solali, Oylali and Ladinou wadis;

· establishing 2 tree nurseries and establishing woodlots of beneficial tree species adjacent to the restored area that provides non-timber forest products (NTFPs) – particularly fodder, fuelwood and construction materials – for local communities. Either one large (10 ha) woodlot per beneficiary community or 5 individual woodlots (10m x 10m) in each beneficiary community will be established[36][36];

· promoting the use of *Prosopis* and/or other relevant species for charcoal production in Tadjourah[37][37]; and

· providing training for local communities on the sustainable use of NTFPs and maintaining restored areas.

In parallel to the interventions that will be implemented in Tajourah Ville and peri-urban area, some follow-up activities on training and skills development and EbA investments will be conducted in the Tadjourah rural areas currently targeted by the ongoing LDCF project: Implementing adaptation technologies in fragile ecosystems of Djibouti's central plains (referred in this PIF as LDCF 2). Those additional activities aim at supporting the long-term sustainability and impact of the LDCF 2 project beyond its closure. To promote continuity of interventions as well as sharing of experiences between both projects, the following activities will be implemented in 5 communities in Tadjourah region (Ad-Bouya, Darkenle, Kalaf, Sourat and Raysali)

· Training on climate-resilient agriculture

· Training on alternative climate-resilient livelihood activities including aviculture and small business

· Support and capacity building of established committees and cooperatives

· Maintenance of established infrastructure (boreholes, irrigation systems and agricultural plots)

· Protection and restoration of key ecosystems (acacia and mangrove)

· Awareness-raising on the importance of key ecosystems for climate change adaptation

Component 3: Capacity-building, knowledge and awareness-raising.

Activities within this Component will increase awareness, knowledge and capacity of local authorities and communities through trainings, exchange of experience events, campaigns as well as the production of evidence-based knowledge on climate change impacts and best-practice adaptation options. This component will increase the capacity of government and non-government staff to plan and implement climate-resilient initiatives in Djibouti. This component will complement the GCF NAP project which is due to start implementation in 2020. The LDCF project's activities on awareness raising, capacity building knowledge generation and management under this component will support the NAP process as well as contribute to it. The regional climate risk and vulnerability assessments as well as regional adaptation plans for Tadjourah and Dikhil will complement the adaptation mainstreaming guidelines and budgeting tools developed by the NAP project for local authorities on and will directly feed into the national adaptation plan of the country.

Component 3 will comprise the following activities:

· developing and implementing national and sub-national campaigns to raise public awareness – including local authorities and CSOs – on adaptation to climate change, by using traditional and modern communication technologies. While most of the population living in urban areas and some rural communities have access to modern technologies – e.g. social media and smart phone applications – more remote communities will be sensitised using traditional channels – e.g. schools and mosques events.

· establishing research programmes on climate change risks and building an evidence base on the cost-effectiveness of various adaptation technologies (e.g. technologies implemented through this project and other EbA investments – see Section A5) and sharing the results of this research with policy- and decision-makers, and researchers. These research programmes will link with Djiboutian research institutions and will build on the relevant ongoing research that is being conducted in the country;

· producing and presenting policy briefs on EbA and best-practice adaptation options during NAP policy dialogues, at SCAPE 1&2 multiannual training workshops for decentralised authorities, and through other relevant knowledge sharing platforms.

· Organising a workshop to train the local authorities (regional and municipal) of Djibouti, Ali Sabieh, Arta and Obock to conduct and use climate risk and vulnerability assessment as well as to plan for adaptation at regional and city level based on the experience of Tadjourah and Dikhil.

· developing a sustainability strategy that includes management arrangements of the adaptation interventions and policy-relevant information for future adaptation programming.

A.1.4. Additional cost reasoning

The proposed LDCF project will increase the capacity of local communities living in urban and rural areas of Dikhil and Tadjourah regions to adapt to the negative effects of climate change, as described in Section A.1.1. This will be achieved within three main Components. The additional cost reasoning for each Component is described below. In addition, Appendix 1 provides the detailed links between baseline projects and the proposed LDCF project.

Component 1: Resilience to droughts in rural areas of Dikhil region

Business as usual scenario:

Under the business-as-usual scenario, regional policies and on-the-ground interventions to restore rangelands, increase fodder supply and food security, improve water availability, and promote socio-economic development Dikhil rural areas including Gobaad Plain are at risk of being undermined by the effects of climate change (as described in Section A.1.2). This is because of the limited implementation of climate change adaptation interventions (particularly large-scale EbA interventions) and a knowledge gap on best-practice adaptation options applicable to Dikhil region. Although PROGRES will implement adaptation interventions that improve access to surface water for agropastoral activities, no interventions to restore natural ecosystems, improve groundwater recharge or extract groundwater are planned. Moreover, interventions to protect agricultural plots against floods will not be implemented through PROGRES. Consequently, the success of PROGRES to improve the productivity of agropastoral and pastoral practices will be hindered by reduced surface water availability and increased floods in Gobaad Plain. The same is true for the baseline project Re.Pro.Va aiming at increasing the resilience to droughts for agropastoral communities in 5 regions including Dikhil (Gobaad). Without LDCF additional funding, Re.Pro.Va activities in Gobaad will include the construction of hydraulic infrastructure and the promotion of climate-resilient agricultural practices without integrating ecosystem restoration and management that are however key to a comprehensive and sustainable adaptation approach. The limited application of climate change adaptation interventions will also negatively affect the implementation of Djibouti Vision 2035, which aim to improve the livelihoods of local communities. Without improved or alternative livelihood options, communities will continue abandoning their plots and, in some cases, migrating or resorting to activities that degrade the environment such as intense wood extraction for charcoal production.

The LDCF 2 project is currently conducting the same type of activities in several rural areas of Hanle Plain (Dikhil) and Tadjourah region. Project interventions include ecosystem protection and restoration, the construction of boreholes, irrigation systems and agropastoral plots as well as climate resilient livelihood through agricultural trainings and the

promotion of alternative economic activities. Initiated in 2014, the project will close at the end of 2020. One mid-term recommendation is to include follow-up activities in the new LDCF project to enhance the impact and strengthen sustainability of interventions. Exchanges of experiences between the two sets of communities will promote peer learning and adoption of climate resilient methods.

Adaptation scenario:

Additional funding (GEF/LDCF: US$4,000,000) is required to promote the adaptation planning at regional and community level and to implement adaptation technologies in Dikhil rural communities including Gobaad Plain. This will increase the capacity of local communities to adapt to the effects of climate change, including more frequent and severe droughts. Moreover, safeguarding and improving access to natural resources – including water and fodder – will contribute to reduce pressure on people in Gobaad Plain to migrate. Climate change risk, vulnerability and adaptation assessments will be undertaken in Dikhil region to identify climate change-related risks on surface and groundwater, adaptation priorities among communities, the siting of different EbA measures and the design and materials used for small-scale grey infrastructure. The outcome of these assessments will also be used to inform development and adaptation planning through the decentralisation and NAP processes in Djibouti. Adaptation technologies will include a combination of green and grey infrastructure, agropastoral and EbA interventions. In preparation for these interventions: i) EIAs will be conducted where necessary for small-scale grey infrastructure interventions; and ii) protocols for specified agropastoral and EbA interventions will be developed. To increase water availability for local communities, including but not limited to the agropastoral communities targeted by PROGRES, small-scale grey infrastructure that promotes groundwater recharge will be constructed. This infrastructure will potentially include: i) sand dams to increase rainwater infiltration[38][38]; ii) gabion walls to strengthen wadi banks and reduce soil erosion[39][39]; iii) two-to-four boreholes for irrigation[40][40]; and iv) rainwater tanks[41][41] [42][42]. The selection and design of small-scale grey infrastructure will be based on lessons learned and best practices from similar past/ongoing initiatives, for example implemented under project LDCF-2. Under this project, lessons learned will be captured on a regular basis and shared on the project's website to inform future similar green and grey infrastructure interventions. The boreholes and rainwater tanks built under the proposed LDCF project will be used to support climate-resilient agropastoral activities in the plots established/rehabilitated by the proposed project.

The proposed LDCF project will implement interventions that strengthen the decentralisation process in Djibouti and complement the grey infrastructure interventions of PROGRES aimed at improving access to surface water and rangeland productivity. As part of the proposed LDCF project, Communities located in identified climate risks and vulnerability hotspots will develop land-use plans that identify which areas of the wadi ecosystems should be protected. In addition, small woodlots for the production of charcoal will be provided to beneficiary households in each community. Either one large (10 ha) woodlot per beneficiary community or 5 individual woodlots (10m x 10m) in each beneficiary community will be established[43][43]. Moreover, ~200 ha of Acacia woodlands and oasis habitat will be restored in the watershed of Gobaad Plain using drought- and flood-resilient tree species. This restoration will build on PROGRES interventions to: i) improve water infiltration and soil quality under current and predicted conditions of climate change; and ii) protect agropastoral plots and green and grey infrastructure constructed by PROGRES and the proposed LDCF project from floods, winds and sand storms. Some of the restoration interventions implemented by the proposed LDCF project will target sites where PROGRES has built small-scale grey infrastructures for surface water. This site selection will serve to assess the benefits of combining EbA – in this case, restoration of *Acacia* woodlands and oasis habitat in the wadi – with small-scale grey infrastructure to reduce the climate change vulnerability of local communities. Furthermore, woodlots with beneficial species will be established at household or communal level adjacent to the restored area to provide fodder and fuel wood for local communities, thereby preventing the degradation of these restored areas. The use of *Prosopis spp.* as an

alternative source of energy will also be promoted in Gobaad; this approach has been evaluated by the FAO (2018) in Djibouti, and recommended as best practice to address energy needs as well as the rapid spread of this invasive alien species[44][44].

Drought-resilient agropastoral plots – with designated grazing areas – will also be established or rehabilitated to improve agricultural and rangeland management. Water will be provided through the boreholes and water tanks established by the proposed LDCF project. A learning-by-doing approach will be implemented to: i) encourage sustainable agricultural practices; ii) reduce the negative impacts of overgrazing, and iii) increase food security and household income under conditions of climate change. Interventions will be designed to ensure that they benefit equally women and men[45][45]. All interventions related to the establishment of the drought-resilient agropastoral plots and trainings on sustainable agriculture will be informed by the lessons learned and best practices identified through the project LDCF-2. Initially, existing agropastoral plots in the intervention site will be mapped and assessed to inform the establishment and/or restoration of agropastoral plots. A socio-economic analysis will also be conducted to identify relevant income-generating activities that could be promoted in Gobaad Plain, with a particular focus on women. For example, poultry raising has already been successfully introduced in the Barah area and will be implemented in Hanle and Tadjourah, under the project LDCF 2. Small solar-powered cold storage for goat milk have also been provided to local communities through these projects. Lessons learned and best practices from these past experiences will be collected and used to inform the design and implementation of alternative economic activities in the Gobaad Plain.

Nurseries will also be established and training provided on: i) planting and maintaining drought- and pest-resilient tree species; ii) planting and maintaining beneficial tree species that provide NTFPs; and iii) the sustainable use of NTFPs. Community level woodlots will be established to provide woodfuel resources. To further support the establishment/restoration of drought-resilient agropastoral plots, local farmers will be trained on techniques for soil conservation and irrigation. The communities the project will work with are largely subsistence farmers to increase food security and household income from agropastoralism, the proposed LDCF project will explore the scope for promoting value addition of agricultural products for households. This could be achieved through: i) identifying appropriate agropastoral products under conditions of climate change ii) conducting value chain analysis to ensure a market for the products; iii) providing local communities with equipment and training on the use and maintenance of the equipment – including technology transfer of producing/processing agropastoral products from neighbouring countries or elsewhere in Djibouti; and iii) supporting existing marketing initiatives in the region, for example the Gobaad cooperative and other MSMEs which will be identified during the PPG development phase.

In parallel to interventions in Gobaad plain, some follow-up activities will be conducted in the 8 sites of the LDCF 2 project including Lilya Bouri, Koudi Koma, Dinamali in Dikhil and Ad Bouya, Darkenle, Kalaf, Sourat and Raysali in Tadjourah region. Additional activities will support the beneficiaries of the agricultural plots created during the LDCF 2 project to practices climate resilient agriculture through trainings targeted to the needs. Around 200 households will be trained to drought and flood resistant agricultural practices. In addition, the project will continue to promote the alternative economic activities introduced during the LDCF 2 project including aviculture, livestock and small businesses (including goat milk) through training sessions. Capacities of the management committees and cooperatives established by the LDCF 2 project in the various communities will be strengthened when necessary. The 10ha of acacia restored in Koudi Koma and Lilya Bouri and the 4ha of mangrove planted in Raysali will need protection, monitoring and follow-up for a few more years after the LDCF 2 project closure to guarantee good health of the plants and collect lessons learned. Finally, the key infrastructure practices will need to be maintained and guarded before the government is ready to take the responsibility. Capacity of the relevant community members and governmental stakeholders at both local and national levels will be strengthened by this new project so that they are able successfully manage and maintain those key infrastructures in the long run.

The US$4,000,000 of GEF/LDCF funding for component 1 will be complemented by US$7,325,000 of co-financing coming from four sources: the PROGRESS project (US$425,000), the project Appui de la decentralization (US$ 2,000,000) the project Appui de la resilience (Re.Pro.Va) (US$ 4,500,000) and the NAP (US$ 400,000).

Component 2: Resilience to floods and droughts in Tadjourah area.

Business-as-usual scenario:

Under the business-as-usual scenario, rapid urban expansion, settlement in flood-prone areas and unsustainable land management practices will continue in Tadjourah Ville. This will cause urban communities to become increasingly vulnerable to the impacts of climate change – particularly flooding. Furthermore, increasing population pressure will continue to result in extensive natural resource extraction, causing ecosystem degradation and the concurrent loss of the flood attenuation properties of intact wadi ecosystems. Climate change impacts will exacerbate the negative effects of current floods, and under the business-as-usual scenario more individuals will be exposed to these climate-related hazards. Increases in the frequency and severity of floods will also further degrade infrastructure in the urban and peri-urban areas of Tadjourah Ville that is already inadequate for meeting basic service delivery requirements (e.g. water, sewerage and sanitation) of communities living in these areas[46][46].

Additionally, under the business-as-usual scenario, EbA will not be implemented in Tadjourah Ville as a cost-effective and low-risk approach to enhancing the climate-resilience of communities and infrastructure[47][47]. The adaptation benefits for urban and peri-urban communities will subsequently not be realised. There is a need for additional flood mitigation interventions – in addition to the Marsaki dyke implemented through the LDCF 2 project – combined with EbA interventions to reduce the impact of floods[48][48]. Without such interventions, investments in infrastructure and ecosystems for economic development in Tadjourah Ville will remain vulnerable to the effects of climate change. Socio-economic development in the city, a major goal of Djibouti Vision 2035, will also be hindered because these climate-related hazards will damage infrastructure for industry, transport and education. Under the business as usual scenario, capacity of local authorities to plan and support Tadjourah's development will be strengthened by the project Appui à la Decentralisation. However, without additional intervention of the proposed LDCF project, adaptation in general and more particularly EbA are unlikely to be successfully integrated and mainstreamed in local development planning and policy revision. The risk is therefore that climate change and extreme events undermine the hard-won development gains in the region.

Adaptation scenario:

Additional funding (GEF/LDCF: US$3,900,000) is required to identify and implement relevant adaptation technologies that increase the capacity of local communities in Tadjourah region with a special focus on Tadjourah Ville to adapt to the effects of climate change, including more frequent and severe floods. These adaptation technologies will include a combination of small-scale grey infrastructure and EbA interventions. By implementing these interventions, the proposed LDCF project will increase the resilience of local communities and socio-economic infrastructure in Tadjourah Ville to floods.

At the outset of the project, climate change risk, vulnerability and adaptation assessments will be undertaken in Tadjourah region and city to identify climate change-related risks on urban developments and adaptation priorities among urban and rural communities. Stakeholder consultations will be held to develop the city adaptation strategy. The outcome of these assessments will serve to: i) identify adaptation options for the region and the city; ii) develop regional and city adaptation plans; and iii) inform adaptation planning through the decentralisation and NAP processes in Djibouti. For example, city adaptation plan will be created to identify spatial planning solutions for Tadjourah Ville, to prevent further urban expansion onto flood-prone areas or along the wadis. The assessment will also consider the effects of climate change – more specifically floods – on the Marsaki dyke, and the temporary and new landfill sites[49][49] and their associated impacts on the environment and population. Once the above assessments are completed, EbA measures combined with small-scale grey infrastructure will be strengthened/constructed in peri-urban areas of Tadjourah Ville to protect communities and critical infrastructure – including

the new site for the town's landfill – from flooding. This will take place from project year 4 as EIAs will be conducted as appropriate prior to the implementation of such grey infrastructure. Upstream and downstream areas of Bodoli, Guittirou, Solali, Oylali and Ladinou wadis, as well as upstream areas of Marsaki wadi will be targeted. Strengthening of the Marsaki dyke and supporting the move of the town's landfill to better address future climate change impacts will also take place, if relevant (based on the results of the assessment). These actions will reduce flood impacts on infrastructures, wadi ecosystems and urban communities.

The proposed LDCF project will also implement EbA to restore ~200 ha of Acacia woodlands and oasis habitat in the upstream and peri-urban watersheds of Tadjourah Ville using climate-resilient indigenous plant species. This restoration will primarily take place on the banks of the Marsaki, Bodoli, Guittirou, Solali, Oylali and Ladinou wadis to enhance the goods and services provided by these ecosystems, such as the mitigation of floodwaters. To support this activity, tree nurseries will be established. The restoration techniques and species selection will be guided by technical protocols developed by the project. To prevent the degradation of these ecosystems, woodlots of beneficial species will be planted adjacent to the restored area to provide NTFPs for local communities. These communities will also be trained on the maintenance of these species as well as the sustainable use and processing of NTFPs. Finally, the use of *Prosopis spp.* – an invasive alien tree species which is endemic in Tadjourah – will be promoted to produce charcoal. The adaptation interventions – including EbA but also capacity building and trainings on climate-resilient livelihoods – implemented under Component 2 will complement and upscale the interventions implemented through LDCF 2 in the Marsaki watershed as well as in the communities of Ad Bouya, Darkenle, Kalaf, Sourat and Raysali. Component 2 of the proposed LDCF project will also support Djibouti's NAP and decentralisation processes by supporting regional and urban adaptation planning. For further details see Section A5.

In addition to the LDCF US$3,900,000, the project co-financing plan of US$3,400,000 for this component comprises two main baseline investments: the project Appui à la Décentralisation (US$3,000,000) and NAP (US$400,000).

Component 3: Capacity building, knowledge and awareness-raising.

Business as usual scenario:

Under the business-as-usual scenario, stakeholders across Djibouti – including the youth, government and CSOs – will continue to have limited understanding of the predicted effects of climate change in both urban and rural areas and will be unaware of adaptation options. In particular, the availability of evidence-based knowledge on climate risks and best-practice adaptation options – including EbA – will remain limited for these stakeholders. This will restrict the mainstreaming of climate change adaptation into national policies and regional development plans, as promoted through the NAP process, and the decentralisation process, respectively. Previous LDCF projects have had training activities attached to technical components associated with, for example, the implementation of adaptation technologies and practices. But codification of experiences and dissemination of lessons learned has been weak to date, missing an opportunity to influence policy making, development of spending plans and budget allocation, and to promote autonomous adaptation. Under the business as usual scenario, the lack of knowledge and evidence on adaptation good practices especially EbA will impede sustainable and climate-resilient development planning at the local level as well as the successful implementation of the SCAPE 1 and 2 nationally despite the support provided by the project Appui à la Décentralisation and projet Appui à la Résilience (RE.Pro.VA).

Adaptation scenario:

Additional funding (GEF/LDCF: US$600,000) is required to increase public awareness and evidence-based knowledge on interventions for climate change adaptation in Djibouti.

An awareness campaign will be developed concerned with adaptation messaging in both urban and rural areas to wider audiences than the immediate project beneficiaries both at the national and the two Regions where the project will work. Awareness raising campaigns may take the form of posters, social media, mobile phone applications, and other kinds of outreach, which will be determined during the PPG phase. Lessons learned from previous LDCF and adaptation-relevant projects will be incorporated into the messaging, to ensure that project experiences are codified and not lost. The implementation phase of the project will develop an outreach plan which includes target audiences and

objectives of the messaging, development of messaging, communication channels and medium to be used. The awareness campaign is intended to promote the autonomous adoption of best-practice ecosystem-based approaches to adaptation among vulnerable rural and urban communities as well as influence policies and planning processes in Government.

Master's-level research students will also have opportunities to develop relevant research on climate change impacts and adaptation that are linked to the proposed LDCF project. There is an urgent need to improve information around climate change vulnerabilities, ecosystem dynamics and cost effectiveness. Applied research will be supported, relevant to policies and planning and as a way of strengthening the evidence base around climate impacts, ecosystem dynamics and cost effectiveness of different adaptation solutions. This is intended to reduce the politicisation of adaptation planning, thereby increasing the effectiveness of adaptation funds. Investing in young, educated people will also help to build a political constituency for adaptation, which will be important in helping Djibouti move along its adaptation pathway for the benefit of vulnerable communities and in addressing urgent and immediate adaptation needs. In addition, the PPG phase will also look at how the project could help to develop tertiary education course curricula in Djibouti, working with the country focal points under the UN Environment Global University Partnership on Environment and Sustainability (GUPES).

Evidence-based information on EbA and successful adaptation interventions and lessons learned in Djibouti for wadi ecosystems in both rural and urban as well as drought and flood prone contexts will be gathered, compiled and policy briefs will be produced and presented *inter alia*: i) during awareness campaigns which will be implemented within this Component; ii) through the online platform established through the LDCF 2 project; and iii) at NAP and SCAPE 2[50][50] workshops to promote the mainstreaming of adaptation into national and local development processes. The format and institutional home for the evidence base developed will be determined during the PPG phase. The information will promote the integration of climate change adaptation into decision-making and development planning in Djibouti. This knowledge management component will be therefore be very important to recognise the different ecosystem management approaches that can be adopted in both urban and rural areas of the country to strengthen resilience to climate change. the evidence, knowledge and capacity developed through components 1 and 2 that will be collected, compiled, analysed and disseminated in component 3 will inform further efforts to implement ecosystem-based climate change adaptation across the country and be used as the basis for the elaboration of the NAP process in Djibouti.

In parallel, an event will be organised to share the results of the regional climate risk and vulnerability assessments and present the regional adaptation plan developed by Tadjourah and Dikhil. The workshop will also be the opportunity to train the country's local authorities on the methodology to assess climate risk and vulnerability levels as well as identify adaptation priorities. Local authorities will also learn the different uses that can be done of those studies and plans.

Finally, a sustainability strategy will be developed to promote the continuation and replication of the project experiences to other communities in Djibouti. This will include management arrangements for the adaptation interventions in Components 1 and 2 that are worked out in partnership with stakeholders and producing policy-relevant and accessible materials on the project experiences and results.

In addition to the LDCF US$600,000, the project co-financing plan of US$1,600,000 for this component comprises three baseline investments that all have a knowledge management and awareness raising component: PROGRESS (US$ 100,000), the project Appui à la Décentralisation (US$400,000) and the project Appui à resilience (Re.Pro.Va) (US$ 1,000,000)

A.1.5. Adaptation benefits (LDCF/SCCF)

The proposed LDCF project will address climate vulnerabilities within a complex socio-economic environment through providing evidence-based knowledge of climate change impacts and best-practice adaptation options in Dikhil and Tadjourah regions. The socio-economic and environmental benefits of project interventions will be monitored to inform the NAP process in Djibouti, for which a proposal is being submitted to the GCF. Benefits will be achieved through: i) building capacities of local authorities and vulnerable

communities to plan for adaptation ii) implementing adaptation technologies including both green and grey technologies iii) training local communities on adaptation technologies using a learning-by-doing approach; iv) improving evidence-based knowledge on climate change impacts and on cost-effective adaptation options in Djibouti; and v) increasing awareness of the national and local government staff, and local communities on climate change adaptation and adaptation opportunities. The information collected from monitoring the benefits will be used to identify relevant adaptation technologies to guide both regional and national policies.

Project interventions including planning and implementing grey and green adaptation options will benefit the inhabitants of both Dikhil and Tadjourah regions amounting repectively to 104,977 and 102,329 people so a total of 207,306 beneficiaries in total. The project will directly benefit 20% of the country's population. At project sites in Dikhil and Tadjourah regions, adaptation interventions such as the planting of 400 hectares of acacia trees, livelihood diversification and drought-resilient agriculture will provide numerous tangible benefits including: i) buffering against extreme climate events; ii) reducing soil erosion; iii) improving and maintaining water quality[51][51]; iv) increasing water supply by increasing infiltration and promoting water conservation; vi) improving food security; and viii) decreasing incidences of disease[52][52]. The 45,000 inhabitants of Tadjourah Ville will benefit from better urban planning and flood-mitigation interventions. In Gobaad Plain (Dikhil region), which has a population of ~10,000 people, an agropastoral families – located in various villages – will directly benefit from improved access to water. In Hanle Plain (Dikhil region) and Tadjourah rural areas, training and skills building activities will be supporting the climate resilient livelihoods and EbA initiatives set up under the project LDCF 2 targeting 8 communities (Koudi Koma, Lilya Bouri and Dinamali in Dikhil as well as Kalaf, Ad Bouya, Darkenle, Sourat and Raysali in Tadjourah).

Initially, the benefits of adaptation technologies will accrue at the local level. However, knowledge generated and disseminated under Component 3 will promote the replication of interventions at a national level. This replication will increase the geographic scale and longevity of the benefits generated by the proposed LDCF project. These socio-economic benefits will also be quantified per region or intervention by one or more post-graduate students joining the Master's-level research programme established under Component 3. Additionally, the proposed LDCF project will strengthen the capacity of regional and local authorities of the country's five regions (Tadjourah, Dikhil, Ali Sabieh, Arta, Obock) and Djibouti Ville to identify climate change impacts and plan for adaptation, consequently complementing the decentralisation and NAP processes in Djibouti. To achieve this goal, climate change impacts and vulnerability assessments will be conducted in each region. Effective interventions that are identified and implemented within Components 1 and 2 will also be promoted as appropriate on-the-ground practices for an integrated approach to adaptation in other countries facing similar climate change problems. Consequently, the proposed LDCF project will facilitate an integrated approach to adaptation at the country level. The number of indirect beneficiaries is the total population of the country so around 1,048,999 people.

A.1.6. Innovation, sustainability and potential for scaling up

The combination of green and grey technologies for adaptation to climate change, framed by science, is an innovative approach that will be implemented in the rural Gobaad Plain and peri-urban areas of Tadjourah Ville under the proposed LDCF project. These interventions will promote: i) water conservation and groundwater recharge; ii) the mitigation of floodwaters; and iii) climate-resilient livelihoods. A growing body of research[53][53] has proven that an EbA approach is an innovative and cost-effective means of adapting to climate change, particularly when used to complement or improve small-scale grey infrastructure[54][54]. The use of EbA in combination with small-scale grey infrastructure is expected to reduce the frequency and severity of droughts in Gobaad Plain and floods in Tadjourah Ville caused by reduced and increasingly erratic rainfall, respectively. This will in turn, increase the resilience of local communities and agropastoral activities in rural areas as well as local communities and infrastructure in urban areas. The resultant increased resilience will promote food security and socio-economic development in Djibouti. To maximise benefits, the proposed LDCF project will collaborate with relevant

stakeholders and use the best available knowledge to avoid redundancy of project interventions as well as promote complementarity of project objectives. Moreover, the lessons learned from this project will be documented and used to inform the funding of future EbA and other adaptation interventions.

The proposed LDCF project is also innovative in its approach to address NAPA priorities while advancing the SCAPE 1&2 (decentralisation) and NAP processes in Djibouti. On-the-ground interventions under Components 1 and 2 will contribute to addressing a series of immediate adaptation priorities of Djibouti, which have been identified in the NAPA and which will be further explored in the climate risk, vulnerability and adaptation assessments in Components 1 and 2. The socio-economic and environmental benefits from the adaptation interventions implemented under Components 1 and 2 will be carefully monitored and lessons learned will be compiled to inform policy development planning in and beyond the project sites. The PPG phase will explore how the monitoring of adaptation and co-benefits can be carried out as well as the format and institutional leadership for gathering and disseminating the planning-relevant evidence from the practical implementation experience. Indeed, the evidence-based knowledge on managing wadi ecosystems, degradation processes and climate change impacts in an urban and rural settings will help to up-scale project interventions in other areas of Djibouti. Moreover, new knowledge on climate change impacts generated from the research programme under Component 3, and on best-practice adaptation options derived from the proposed LDCF project and previous NAPA-implementation projects, will be compiled and shared with decision-makers. As a result, the proposed LDCF project will promote integrated adaptation planning at national and local levels in support of the decentralisation and NAP processes in Djibouti.

More specifically, Djibouti's NAP aims to facilitate medium- to long-term adaptation planning (Sub-outcome 1.1 of the NAP proposal submitted to the GCF in 2018); this will be supported by the proposed LDCF project's Outputs 1.1, 1.2, 1.3, 2.1, 2.2 and Outcome 3. Under Output 1.1 of the proposed project, vulnerability assessments will be conducted in Dikhil regions to inform the development of regional adaptation plan (output 1.2) and community land-use plans (output 1.3) that mainstream adaptation interventions including EbA and small grey infrastructures; under Output 2.1, a climate change impacts and vulnerability assessment conducted in Tadjourah region will serve to design regional and city land-use and adaptation plan (output 2.2) to increase the resilience of the region and city to floods and droughts. Together, these Outputs will support the sub-outcome 2.2 of the NAP, by facilitating the mainstreaming of adaptation considerations into sub-national policies and plans. Research programmes on climate change adaptation in agropastoral areas and for climate-related risks management in Dikhil and Tadjourah will also inform Sub-outcome 1.2 of the NAP, which aims to identify adaptation response measures for the SCAPE implementation in climate-sensitive sectors, including agriculture, livestock and coastal areas. Finally, under Output 3.3 of the proposed project, policy briefs on climate change adaptation will be prepared and presented during awareness-raising meetings for national and local stakeholders, civil society, private sector and researchers planned under the NAP. It should be noted that all Outcomes of Djibouti's NAP proposal were designed to support SCAPE and the decentralisation process in Djibouti, in particular to mainstream adaptation into sub-national sectoral policies, planning and budgeting processes. Hence, the proposed LDCF project will promote both NAP and SCAPE processes in Djibouti.

The sustainability and replication of the proposed LDCF project will be further enhanced by:

· providing **training** to local communities on the adaptation technologies implemented by the project including training on the maintenance of the species and/or equipment used;

· **conducting a national awareness campaign on adaptation technologies** and the benefits of an approach using both EbA and grey infrastructure interventions, using modern communication technologies including mobile phone applications and social media;

· **building an evidence base of the successes, failures and lessons learned** from past and on-going adaptation initiatives implemented in Djibouti including *inter alia* the LDCF projects; and

· **promoting continuity and upscaling of successful interventions** – by investing in capacities to maintain the adaptation measures including the development of management plans.

A.1.7 Alignment with GEF strategies[55]

The propose LDCF project is aligned with the new GEF Programming Strategy on Adaptation to Climate change for the Least Developed Countries Fund and the Special Climate Change Fund. In particular, the proposed project supports the following elements:

Objective 1: Reduce vulnerability and increase resilience through innovation and technology transfer for climate change adaptation

- Innovation is promoted through several project interventions, in particular the combination of EbA with small-scale grey infrastructure, framed by climate risk science in Tadjourah City and Gobaad Plain to reduce flood-related risks on communities and infrastructure and to increase availability of water.
- Climate risks on communities and climate-induced displacement and/or migration will be reduced through EbA and small-scale grey infrastructure to protect local communities against floods; and by promoting climate-resilient and alternative economic activities that improve livelihoods in rural areas.
- Innovative communication technologies, including mobile phone applications and social media, will be used to raise awareness of climate change impacts, EbA and other adaptation options, among the population.
- Existing cooperatives and small businesses involved in agropastoral activities will be strengthened/supported through Component 2 of the proposed projects in their efforts to contribute to adaptation ambitions; in particular, women's groups will receive training and equipment for climate-resilient income-generating activities including poultry raising and cold storage for goat milk.

Objective 2: Mainstream climate change adaptation and resilience for systemic impact

- Using LDCF grants, the proposed project will support the decentralisation process in Djibouti, which is carried out through Djibouti Vision 2035 strategy and operationalised through SCAPE and Projet d'Appui a la Decentralisation (funded by the E.U.). This support will be provided through the proposed project's Output 2.2 as City adaptation plans will be developed for Tadjourah Ville, and Outputs 3.2 and 3.3, which will generate evidence-based knowledge on climate change risks and adaptation options. Together, these interventions will inform the decentralisation process in the regions of Tadjourah and Dikhil.

Objective 3: Foster enabling conditions for effective and integrated climate change adaptation

- Integrated climate change adaptation is promoted as the proposed project will build the capacity of national and local stakeholders to produce development plans that mainstream climate change concerns. In Tadjourah and Dikhil, climate-resilient land-use plans and city adaptation plans will be produced in a participatory way, involving local community members and municipal authorities. Moreover, national awareness-raising campaigns on adaptation to climate change will be undertaken to promote the adoption of best-practice ecosystem-based approaches to adaptation among national stakeholders, based on the lessons learned from the proposed LDCF project and other relevant initiatives in Djibouti.

Appendix 1: Links between the baseline projects and the proposed LDCF project

Baseline projects Goals and activities	Climate change hazards affecting the baseline projects	Impacts to the baseline projects and targeted populations as a result of climate change	Targeted ecosystem services of the proposed LDCF project	Alternative scenario including complementary activities of the proposed LDCF project	Expected benefits of the proposed LDCF project
Project targeted vulnerable sites and communities: Local communities living in Gobaad Plain and Tadjourah Ville that experience the adverse effects of current and predicted climate change, in particular droughts and floods as a result of reduced and increasingly erratic rainfall, respectively.					
Projet d'Appui a la Decentralisation, au renforcement du systeme local de gouvernance, et a la promotion du developpement local inclusif *Support the decentralisation process in Djibouti by strengthening regional authorities and building planning capacity at the regional level*	· Increasing frequency of droughts and floods	· Reduced efficiency of regional and local policies that support socio-economic development because of increased frequency and severity of droughts and floods.	· Decrease d surface water runoff and erosion. · Increased vegetation cover, soil stability infiltration of water into topsoil. · Increased protection of marine and coastal ecosystems. · Increased mitigation of floodwaters.	· Increasing evidence-based knowledge of climate change impacts and best-practice adaptation options. · Increasing capacity to mainstream adaptation into regional policies. · Increasing awareness on the benefits of EbA to restore[1] Acacia woodlands, coastal and oasis ecosystems. · Increasing resilience of fish stocks, rangelands, grazing reserves and fodder banks to drought and floods.	· Climate-resilient ecosystems that reduce the effects of drought and floods on local communities including increasing livelihood options. · Evidence-based knowledge on: i) best-practice approaches for EbA; and ii) the benefits of restoring Acacia and oasis ecosystems using climate-resilient species. · Policy briefs on EbA and best-practice adaptation options presented to national, regional and local policy-makers.

Baseline projects Goals and activities	Climate change hazards affecting the baseline projects	Impacts to the baseline projects and targeted populations as a result of climate change	Targeted ecosystem services of the proposed LDCF project	Alternative scenario including complementary activities of the proposed LDCF project	Expected benefits of the proposed LDCF project
Programme for Water and Soil Management (PROGRES) *Improve livelihood conditions and reduce poverty of rural agropastoral communities through enhanced access to water and sustainable land management in Gobaad Plain.*	· Increasing frequency of climate-induced extreme events including droughts and floods.	· Decreased biodiversity as a result of droughts and flooding. · Reduced provision of ecosystem goods and services. · Reduced livestock and crop production.	· Decreased surface water runoff and erosion. · Increased vegetation cover, soil stability infiltration of water into topsoil. · Increased mitigation of floodwaters.	· Building technical capacity to plan and implement EbA and integrate this approach into regional adaptation planning. · The tailoring of climate-resilient Acacia woodlands and oasis ecosystems. · Increasing awareness on the benefits of EbA to restore[2] Acacia woodlands and oasis ecosystems. · Increasing resilience of ecosystems to current and predicted effects of climate change through restoration using climate-resilient species.	· Climate-resilient ecosystems. · Watershed conservation through groundwater recharge and improved soil quality. · Decreased anthropogenic pressure on Acacia woodlands and oasis ecosystems.

Baseline projects Goals and activities	Climate change hazards affecting the baseline projects	Impacts to the baseline projects and targeted populations as a result of climate change	Targeted ecosystem services of the proposed LDCF project	Alternative scenario including complementary activities of the proposed LDCF project	Expected benefits of the proposed LDCF project
Projet d'Appui a la Resilience des Populations Rurales (Re.Pro.Va) *Improve livelihood conditions and reduce poverty of rural agropastoral communities living in the five regions of Djibouti through building capacity of local agricultural extension officers and rural organisations and increasing agricultural productivity.*	· Increasing frequency of climate-induced extreme events including droughts and floods.	· Decreased biodiversity as a result of droughts and flooding. · Reduced provision of ecosystem goods and services. · Reduced livestock and crop production.	· Decreased surface water runoff and erosion. · Increased vegetation cover, soil stability infiltration of water into topsoil. · Increased mitigation of floodwaters.	· Building technical capacity of agricultural extension officers and cooperatives to plan and implement EbA and integrate this approach into regional adaptation planning. · The tailoring of climate-resilient Acacia woodlands and oasis ecosystems. · Increasing awareness on the benefits of EbA to restore[3] Acacia woodlands and oasis ecosystems. · Increasing resilience of ecosystems to current and predicted effects of climate change through restoration using climate-resilient species.	· Climate-resilient ecosystems. · Watershed conservation through groundwater recharge and improved soil quality. · Decreased anthropogenic pressure on Acacia woodlands and oasis ecosystems.

[1] World Bank Data, 2015.

[2] Djibouti is divided into five administrative regions – Tadjourah, Dikhil, Obock, Arta and Ali Sabieh – and one city, Djibouti Ville. Dikhil and Tadjourah are, respectively, the second and third most populated region of the country with respectively an estimated 104,977 and 102,329 inhabitants.

[3] WWF Ecoregion. Available at http://www.worldwildlife.org/ecoregions/at1305 (accessed on 20 January 2015).

[4] Tadjourah Ville is the largest city of Tadjourah and the third largest city of the country.

[5] Shackleton, R.T., Le Maitre, D.C., Pasiecznik, N.M., Richardson, D.M., 2014. Prosopis: a global assessment of the biogeography, benefits, impacts and management of one of the world's worst woody invasive plant taxa. AoB Plants 6, plu027.

[6] Primarily in Gobaad Plain.

[7] Primarily in Tadjourah Ville.

[8] 4ème Rapport National Sur La Diversite Biologique De La République de Djibouti. (2009) Ministere de l'Habitat, de l'Urbanisme, de l'Environnement et de l'Amenagement du Territoire.

[9] Programme d'Action National d'Adaptation aux changements climatiques (2006). République de Djibouti.

[10] Ministry of Interior and Decentralisation, Dikhil Prefecture (2009) Regional Development Plan for Dikhil. Report prepared under the "Programme d'Appui à la Décentralisation et au Collectivités Locales (PADCL)" with the support of PNUD, UNCDF and UE.

[11] As a result, poverty affects 95% of the rural population, and half of this population is affected by severe food insecurity. FAO (2013) Cadre de Programmation PAYS (CPF). FAO-Djibouti.

[12] Including schools and colleges.

[13] It should be noted the mid-term review (MTR) on Djibouti LDCF 2 indicated a risk that the Marsaki dyke will not sufficiently protect the city in the future, as climate change impacts on floods have not been well integrated into the design of the dyke. *Ibid.*

[14] The city of Tadjourah is planning to relocate the landfill to a higher site, further away from the sea; however this relocation has been delayed. UN Environment/GEF, 2019, *Mid-term review of the project: Implementing adaptation technologies in fragile ecosystems of Djibouti's central plains.* Draft report.

[15] In the past 20 years, intense rains have caused flooding in Gobaad Plain approximately every five years (1994, 1998, 2004, 2010) causing degradation of agropastoral land.

[16] In 2013, excessive precipitations in and around Tadjourah Ville resulted in heavy damages to infrastructure and a serious power cut in the city which lasted several days.

[17] Over the past several decades, Djibouti has experienced the following changes to rainfall amounts: i) a decrease from April to July; ii) a slight increase from August to September; and iii) a considerable decrease in January. Djibouti: Programme National d'Adaptation aux Changements Climatiques, 2006.

[18] Adaptation Partnership. 2011. Review of Current and Planned Adaptation Action: East Africa.

[19] Vision Djibouti 2035, Republique de Djibouti.

[20] UNDP, MHUE, *Djibouti NAP: Mainstreaming Climate Change Adaptation into Djibouti's Planning and Budgeting Processes*. Under review by the GCF (as of April 2019).

[21] Including collection of woodfuel, construction and overgrazing.

[22] From urbanisation and refugee immigration.

[23] For example, the capacity of the existing dredging canals in peri-urban areas of Tadjourah Ville is insufficient to manage floodwaters under conditions of climate change.

[24] The LDCF1 project is GEF Project ID 3408 entitled “Implementing NAPA Priority Interventions to Build Resilience in the most Vulnerable Coastal Zones in Djibouti”. It is referred to in this PIF as LDCF 1.

[25] The LDCF2 project is GEF Project ID 5021 entitled “Implementing Adaptation Technologies in Fragile Ecosystems of Djibouti's Central Plain”. It is referred to in this PIF as LDCF 2.

[26] President's Report. 2016. Proposed loan and grant to the Republic of Djibouti for the Soil and Water Management Programme. International Fund for Agricultural Development (IFAD).

[27] Ilstedt, U., Tobella, A.B., Bazié, H.R., Bayala, J., Verbeeten, E., Nyberg, G., Sanou, J., Benegas, L., Murdiyarso, D., Laudon, H. and Sheil, D., 2016. Intermediate tree cover can maximize groundwater recharge in the seasonally dry tropics. *Scientific reports*, *6*.

[28] https://eeas.europa.eu/delegations/djibouti/53248/appui-%C3%A0-la-r%C3%A9silience-des-populations-rurales-lunion-europ%C3%A9enne-la-fao-et-le-minist%C3%A8re-de_en

[29] https://www.lejournaldudeveloppement.com/djibouti-lue-debloque-25-millions-deuros-pour-la-decentralisation-et-les-femmes/

[30]Munang, R. et al. 2013. Climate change and Ecosystem-based Adaptation: a new pragmatic approach to buffering climate change impacts. Environmental Sustainability, 5: 67-71; Colls, A. et al. Ecosystem-based Adaptation: a natural response to climate change. International Union for Conservation of Natural Resources (IUCN), Gland, Switzerland. 16.

[31] Jones, H.P., Hole, D.G., Zavaleta, E.S. 2012. Nature Climate Change, 2: 504-509

[32] Ministry of Interior and Decentralisation, Dikhil Prefecture (2009) Regional Development Plan for Dikhil. Report prepared under the “Programme d’Appui à la Décentralisation et au Collectivités Locales (PADCL)” with the support of PNUD, UNCDF and UE.

[33] Utilisation of *Prosopis* should be coherent with Djibouti’s overall strategy for managing *Prosopis* and should follow best practices from the region. For example, see Shackleton, R.T., Le Maitre, D.C., Pasiecznik, N.M., Richardson, D.M., 2014. Prosopis: a global assessment of the biogeography, benefits, impacts and management of one of the world’s worst woody invasive plant taxa. AoB Plants 6, plu027. It is also recommended in a study conducted by the FAO in 2018: http://www.fao.org/3/CA0163EN/ca0163en.pdf

[34] Sustainable use of groundwater will be promoted through the project to avoid excessive abstraction. Lessons learned on sustainable groundwater extraction will be used, for example from the Adaptation Fund project “Developing Agro-Pastoral Shade Gardens as an Adaptation Strategy for Poor Rural Communities in Djibouti”.

[35] The establishment of community-managed or individual woodlots will be determined during a feasibility study conducted in each project site at project onset.

[36] The establishment of community-managed or individual woodlots will be determined during a feasibility study conducted in each project site at project onset.

[37] This was a recommendation of UN Environment/GEF, 2019, *Mid-term review of the project: Implementing adaptation technologies in fragile ecosystems of Djibouti’s central plains.* Draft report. The use of *Prosopis* for charcoal production in Djibouti is also recommended in a study conducted by the FAO in 2018: http://www.fao.org/3/CA0163EN/ca0163en.pdf

[38] Ryan, C. and Elsner, P., 2016. The potential for sand dams to increase the adaptive capacity of East African drylands to climate change. *Regional Environmental Change*, *16*(7), pp.2087-2096.

[39] Rosgen, D.L., 1997. A geomorphological approach to restoration of incised rivers. In *Proceedings of the conference on management of landscapes disturbed by channel incision* (Vol. 16). ISBN 0-937099-05-8.

[40] Braune, E. and Xu, Y., 2010. The role of ground water in Sub-Saharan Africa. *Ground Water*, *48*(2), pp.229-238.

[41] Mati, B.M., Malesu, M. and Oduor, A., 2005. Promoting rainwater harvesting in eastern and southern Africa: The RELMA experience. *World Agroforestry Centre*.

[42] Constructing boreholes and mobilising surface water are strategies which are also recommended in Djibouti Poverty Reduction Strategy Paper. https://www.imf.org/external/pubs/ft/scr/2012/cr12131.pdf

[43] The establishment of community-managed or individual woodlots will be determined during a feasibility study conducted in each project site at project onset.

[44] See project: FAO (2018), *Using Prosopis as an energy source for refugees and host communities in Djibouti, and controlling its rapid spread*. http://www.fao.org/3/CA0163EN/ca0163en.pdf

[45] PPG consultations should identify adequate practices to have a 50-50% split in beneficiaries between women and men.

[46] One levee (2 km long, 2 m high and 2 m wide) at the lower reaches of the Marsaki wadi will be rehabilitated to protect certain urban areas in Tadjourah from flooding. However, this infrastructure is not sufficient to manage the current and predicted effects of climate change. For example, the canals in peri-urban areas of the city are degraded and insufficient for the increasing volumes of rainwater under conditions of climate change. Moreover, the current number of microdams is not enough to store this rainwater thus limiting direct water access for the growing population of Tadjourah. There is therefore a need for more water management infrastructure for adaptation – or to upgrade existing infrastructure – to increase the resilience of local communities living in the city.

[47] EbA interventions also increase the climate resilience of the hard infrastructure, and decrease the maintenance and repair costs of hard infrastructure

[48] For example, there is inadequate natural and artificial infrastructure including vegetation cover in wadi beds, microdams and canals to slow water flows (which would mitigate the negative effects of intense rain events on local communities).

[49] Tadjourah Ville has already identified a site to relocate the landfill. See: Schemas Directeur d'Amenagement Urbain de la Ville de Tadjourah, p.66

[50] SCAPE 2015-2019 is ending end of 2019; a new SCAPE 2020-2025 will be finalized soon and continue/build on the work of SCAPE 1 to support Djibouti Vision 2035 strategy.

[51] This will increase the availability of fresh water and result in fewer water-borne diseases.

[52] Flooding results in increased instances of water-borne diseases such as cholera as a result of stagnant surface water.

[53] Munang, R. et al. 2013. Climate change and Ecosystem-based Adaptation: a new pragmatic approach to buffering climate change impacts. Environmental Sustainability, 5: 67-71; Colls, A. et al. Ecosystem-based Adaptation: a natural response to climate change. International Union for Conservation of Natural Resources (IUCN), Gland, Switzerland; Reid, H. 2015. Ecosystem- and community-based adaptation: learning from community-based natural resource management. Climate and Development, DOI:

10.1080/17565529.2015.1034233; Doswald, N. et al. 2014. Effectiveness of ecosystem-based approaches for adaptation: review of the evidence-base. Climate and Development, DOI: 10.1080/17565529.2013.867247. Munroe R. et al. 2012. Review of the evidence-base for ecosystem-based approaches for adaptation to climate change. Environmental Evidence, 1:13.

[54] Jones, H.P., Hole, D.G., Zavaleta, E.S. 2012. Nature Climate Change, 2: 504-509

[55] GEF Programming Strategy on adaptation to climate change for the Least Developed Countries Fund and the Special Climate Change Fund and Operational improvements July 2018 to June 2022. Available at: https://www.thegef.org/documents/gef-programming-strategy-adaptation-climate-change-ldcf-and-sccf-and-operational

1b. Project Map and Coordinates

Please provide geo-referenced information and map where the project interventions will take place.

Tadjourah Ville: 11.7913° N, 42.8796° E

Goobad Plain: 11°02'12.0"N 42°09'05.0"E

2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Indigenous Peoples and Local Communities No

Civil Society Organizations No

Private Sector Entities No

If none of the above,please explain why:

A.2. Stakeholders

The proposed LDCF project will be designed and implemented through a participatory approach with stakeholder consultation and validation for all major activities. This consultation will include community surveys, regular meetings and training workshops. An indicative list of these stakeholders – and the roles that they will play in project design (PPG phase)– is provided in Appendix 2.

During the preparation of this PIF, initial consultations with relevant stakeholders were undertaken from 14 to 15 September 2014, from 6 to 15 January 2015, from 18 to 23 January 2017 and from 18 to 25 March 2019. The objective of these consultations was to discuss the initial design of the project. They included meetings with the local authorities and local cooperative of Gobaad, the Prefet of Tadjourah, the Research Center CERD and the Ministry of Agriculture (for PROGRESS project) as well as discussion with the teams of the LDCF-1, 2 and 3 projects. Further consultations with local communities, CSOs and private sector will take place during the PPG phase.

Representatives from aligned initiatives and projects will be regularly consulted to enhance collaboration for effective and informed implementation. A comprehensive list of such entities is provided in Section A.5. The identified stakeholders – and the specific synergies that will be formed with them – will be confirmed during the PPG phase.

The lead Executing Agency is the Ministry of Habitat, Urbanism and Environment. Execution of specific activities such as agriculture, woodlot development and infrastructure may be conducted by other Ministries. Execution modalities will be fully scoped out during the PPG phase.

In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement.

The proposed LDCF project will be designed and implemented through a participatory approach with stakeholder consultation and validation for all major activities. This consultation will include community surveys, regular meetings and training workshops. An indicative list of these stakeholders – and the roles that they will play in project design – is provided in Appendix 2.

During the preparation of this PIF, initial consultations with relevant stakeholders were undertaken from 14 to 15 September 2014, from 6 to 15 January 2015, from 18 to 23 January 2017 and from 18 to 25 March 2019. The objective of these consultations was to discuss the initial design of the project. Further consultations with local communities, CSOs and private sector will take place during the PPG phase.

Representatives from aligned initiatives and projects will be regularly consulted to enhance collaboration for effective and informed implementation. A comprehensive list of such entities is provided in Section A.5. The identified stakeholders – and the specific synergies that will be formed with them – will be confirmed during the PPG phase.

The lead Executing Agency is the Ministry of Habitat, Urbanism and Environment. Execution of specific activities such as agriculture, woodlot development and infrastructure may be conducted by other Ministries. Execution modalities will be fully scoped out during the PPG phase.

Appendix 2. Indicative list of stakeholders to be consulted during PPG phase.

Organisation/institution	**Role in project design**
UNEP	Oversee project design.
Ministry of Urbanism, Habitat, Environmental and Land-use Planning	Coordinate data collection in-country for project design and review project design as Executing Agency of the project.
Ministry of Equipment and Transport	Contribute information on planned development for urban and transport infrastructure in the intervention sites.
Ministry of the Decentralisation	Contribute information on planned decentralisation process in the intervention sites and on baseline/co-financing initiatives such as SCAPE 2
Ministry of Economy, Finance and Planning in charge of Privatisation	Contribute information on integrating adaptation into regional and local development planning.
Ministry for the Promotion of Women and Family Planning in charge of Relationship with the Parliament	Contribute information on income-generating activities – such as NTFPs, agricultural processing techniques and agricultural interventions – that provide equal benefit to women and men.
Ministry of Agriculture, Fisheries, Animal Husbandry and Fishery Resources	Contribute information on current practices for i) land management; ii) pastoralism and agropastoralism; iii) water management; and iv) fisheries. Department of Water and Department of Grand Infrastructures are particularly important stakeholders to be consulted.
Centre for Research, Information and Production under the Ministry of National Education and Professional Training	Contribute information on developing research programmes on EbA monitoring
National Meteorological Agency	Contribute information on projected climate change, predicted effects of climate change and vulnerable areas and communities.
Tadjourah Ville Government	Contribute information on urban planning and development in Tadjourah Ville to inform project site selection and design of activities for effective flood protection.

Agropastoralism Association of Gobaad and Agropastoralism Cooperative of Gobaad	Contribute information on: i) current pastoral and agropastoral practices; and ii) restoration and establishment of agropastoral plots – including design considerations and species selection.
Regional Government of Gobaad – including the regional head (prefet) and the Regional Advisory Committee of Dikhi	Contribute information on development planning in Gobaad Plain including water and land management plans.
University of Djibouti	Contribute information on existing Master's programmes and entry points for enhanced education on adaptation to climate change.
IFAD	Contribute information of co-finance initiatives including PRAREV and PROGRES.
Schools	Contribute information on the possibility of using schools as a channel for awareness raising campaigns at the local and national level

3. Gender Equality and Women's Empowerment

Briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis).

A.3. Gender Considerations

In 2002, Djibouti adopted a National Policy for the Integration of Women into Development (SNIFD)[1]. The objective of this policy is to enable women to attain responsibility and decision-making opportunities in social and economic development. In particular, there is a focus on health, education and livelihoods. Gender equity will be considered at all stages of the design and implementation of the proposed LDCF project during the PPG phase, contributing to realising the objectives of SNIFD. The PPG phase of the proposed LDCF project will incorporate a gender gap analysis, to inform inclusivity and gender equity in project activities. Gender will be considered when designing the project activities to promote involvement of women in decision-making processes and implementation of the project activities. For example, income-generating activities targeting women will be implemented through the project, including poultry raising and provision of small cold storage for goat milk[2]. To ensure that the progress of gender mainstreaming can be monitored throughout the project, gender disaggregated targets will be developed and used to monitor indicators, where appropriate. Moreover, gender sensitivity will be incorporated into training topics and training logistics so that female participants are empowered to participate in the training and implementation of appropriate adaptation technologies. To this end, trainers will be required to have the skills and experience necessary to plan and facilitate gender-sensitive training. Further scope for the consideration of gender in the project activities will be identified at the PPG phase. To do so, the Ministry for the Promotion of Women and Family Planning in charge of Relationship with the Parliament (MPFPF) will be consulted and involved in the Inception and Validation workshops of the PPG phase.

[1] Politique Nationale pour matière d'intégration de la femme dans le développement.

[2] Lessons learned and best practices developed during implementation of on-the-ground activities of the LDCF 2 project on poultry raising and milk storage including their impacts on women will be compiled and used to guide the interventions of the proposed LDCF project.

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment? Yes

closing gender gaps in access to and control over natural resources; Yes

improving women's participation and decision-making; and/or Yes

generating socio-economic benefits or services for women. Yes

Will the project's results framework or logical framework include gender-sensitive indicators?

Yes

4. Private sector engagement

Will there be private sector engagement in the project?

Yes

Please briefly explain the rationale behind your answer.

Existing cooperatives and small businesses involved in agropastoral activities will be strengthened/supported through Component 2 of the proposed projects in their efforts to contribute to adaptation ambitions; in particular, women's groups will receive training and equipment for climate-resilient income-generating activities including poultry raising and cold storage for goat milk

5. Risks

Indicate risks, including climate change, potential social and environmental risks that might prevent the Project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the Project design (table format acceptable)

A.4. Risks

#	Description	Potential consequence	Countermeasures	Risk category	Probability & impact (1–5)
National-level risks					
1	Unwillingness to work together or share information and disagreement among stakeholders on the allocation of roles in the proposed LDCF project.	Project inventions delayed or duplicated because of uncertain role allocation. Effectiveness of project management is reduced.	An inception workshop will be held for representatives from relevant institutions at the onset of the PPG development phase to discuss and validate the roles, responsibilities and priorities of each participating stakeholder.	Organisational	P = 3 I = 4

2	Lack of political will to implement proposed LDCF project activities.	Loss of government support may result in the lack of prioritisation of project activities.	The PPG phase will scope out how to develop political leadership for the project in order to resolve conflicts and increase the motivation to implement the project effectively. Organise bi-annual project steering committee meetings to keep up engagement and stake in the project. Empower government departments to implement activities relevant to their mandate. Regular stakeholder consultations will be organised to promote government support of the project. Government stakeholders will be involved in all decision-making[1] for the proposed LDCF project. Methods for stakeholder engagement that have proven effective during the LDCF 1 and LDCF 2 projects will be replicated as appropriate.	Organisational	P = 2 I = 4

3	High turnover of staff members in executing agency.	Changes in project-related government priorities and poor institutional memory – particularly capacity that will be built through the proposed LDCF project – result in disruptions or delays in project implementation and coordination. Moreover, these changes will hinder the sustainability of interventions after the project finishes.	A validation workshop will be organised at inception to discuss these risks with relevant government stakeholders and identify solutions. Moreover, several government representatives will be involved in the project from its inception to ensure that there is continuity of government involvement through the course of the proposed LDCF project.	Organisational	P = 4 I = 4
4	Low technical capacity. Finding qualified and reliable local experience	Could lead to delays in contracting and affect the quality of the implementation	Use good contacts made during past projects. Put into place a procurement monitoring plan to check compliance with international monitoring standards.	Technical	P = 2 I = 4
5	lack of resources and capacity to maintain the project interventions such as infrastructures after the end of the implementation phase	Would reverse hard won development gains of the project	Develop a strong exit strategy. Engage all relevant stakeholders in project activities. Raise awareness on the benefits of project intervention. Increase capacity of national and local authorities to plan, fund and mainstream adaptation into development planning	Organisational	P = 2 I = 3
6	Fiduciary risk	Could lead to delays and failure to deliver due to poor fund management	Develop control measures for good fiducial risk management based on the lessons learned of the LDCF-1 and 2 projects and integrated in a fiduciary risk management plan	Financial	P=2 I=4
Local level risks					

7	Limited acceptance/adoption of adaptation interventions by local communities.	Local communities may not adopt interventions during or after the proposed LDCF project, resulting in the continued unsustainable use of resources. Moreover, interventions will not be sustainable after the project finishes.	Please see sustainability section (A.1.6). Local communities will be involved in designing, as well as implementing, adaptation technologies and plans, which will be implemented in a gender-equitable manner. Special attention will be given to engaging with village elders and head of local communities to ensure their support. A stakeholder engagement plan will be drawn up during the PPG phase. Moreover, these stakeholders will benefit from LDCF interventions. Awareness campaigns will be conducted on climate change, and options for adaptation in Djibouti. This will promote understanding of climate change among the population as well as promote the sustainability and upscaling of the approach.	Social	P = 1 I = 4
8	Extreme climatic events and climate variability damage project interventions.	Current and future climate and seasonal variability and/or climate-related hazards result in poor restoration results.	The EbA and other adaptation interventions will be designed to withstand current and future climate variability.	Environmental	P = 2 I = 4
9	Implemented interventions are not cost effective.	Economic losses could result in reduced budget allocation to project activities.	Cost-effectiveness is a major criterion for the selection of the project interventions. Moreover, the experience gathered under LDCF 1 and LDCF 2 projects will facilitate the design of suitable and cost-effective interventions under the proposed LDCF project.	Economic	P = 2 I = 3

10	Limited local technical capacity to design and implement adaptation interventions hinders the proposed project interventions.	Limited local capacity to design appropriate interventions for adaptation.	Existing capacity gaps will be identified, taking into account the capacity-building activities of the LDCF 1 and 2 projects. Human resources will be developed accordingly (e.g. training on adaptation technologies for local authorities and communities). Best practices and lessons learned regarding the successes and failures of implementing adaptation technologies during the LDCF 1 and LDCF 2 projects will be considered during design of interventions.	Technical	P = 1 I = 3
11	Insufficient surface water and groundwater available for EbA in Gobaad Plain.	Failure to effectively carry out EbA interventions.	Infrastructure for water conservation will be constructed at intervention sites in Gobaad Plain, thereby contributing to water security. Studies on water resource availability, quality and dynamics will be conducted to select sites for long-term water availability.	Environmental	P = 3 I = 4
12	Lack of women's participation in the project implementation	Difficulties to reach the targeted beneficiaries as women are often disproportionally represented among the most vulnerable. Limited empowerment of women.	Integrate lessons learned from previous project in particular LDCF-1. Integrate good practices to support women's participation and empowerment.	Social/cultural	P = 2 I = 4

In addition to the above risk screening, the UNEP Environmental, Social and Economic Review Note (ESERN) was developed (Annex 3). It assesses the preliminary overall risk as medium and highlights specific risks that will need to be further analyzed and mitigation strategies that will need to be detailed during the PPG phase. Those include:

- - The risk of increased water consumption due to the promotion of agricultural activities that will be maintain through water management practices and drought-resilient agricultural techniques as well as an increased water recharge and catchment supported by ecosystems restoration

- - The risk linked to potential negative impacts of dams and other hard infrastructure promoted by the project to reduce flood risk in Tadjourah and support water catchment and recharge in Dikhil. Those risks will be reduced by looking at lessons learned from past experiences and conducting systematic Environmental Impact Assessments and other studies as necessary

- The risk of triggering some movements of population especially regarding temporary settlements of pastoralists near newly constructed boreholes to access water during the hot season. The impact of those movements will have to be further analysed during the PPG phase to ensure that it does not lead to increased tensions between or within communities

- The risk linked to the creation of new restrictions on land use to protect and conserve key wadi ecosystems. This will be limited by the engagement of communities and their leaders in setting up those restrictions and the promotion and support of key alternative livelihood options by the project.

- The risk to affect traditional livelihoods or development priorities as set by the communities by promoting alternative livelihoods (agriculture, aviculture, woodlot) to traditional pastoralism that is highly challenged by climate change.

- The risk to provide unequal economic benefits to a limited group of people will be limited by the community-led identification of beneficiaries for livelihood activities based on interest and availability as well as the promotion of wide ecosystems restoration interventions and infrastructure that will provide long-term undifferentiated benefit to the community or city / neighbourhood at large.

Appendix 3. UNEP Environmental, Social and Economic Review Note (ESERN)

I. Project Overview

Identification	*Insert Project ID# from Programme Framework Table* Project ID: 9186 UNEP ID:1368
Project Title	*Insert title (adding words 'project preparation proposal for' before title)* Project Identification Form (PIF) for "Planning and implementing Ecosystem based Adaptation (EbA) in Djibouti's Dikhil and Tadjourah regions"
Managing Division	Ecosystems Division
Type/Location	*[Global/Normative; Regional; National]* National

Region	*(Africa/ Europe/ North America/ Asia Pacific/ Latin America Caribbean/ West Asia)* Africa
List Countries	*Enter country name(s)* Djibouti
Project Description	*Provide the project summary and description in 2-3 paragraphs* The **problem** that the proposed LDCF project seeks to address is that urban and rural communities in Djibouti are vulnerable to the impacts of climate change. The vulnerability of these communities to climate change is increased by: i) the degradation of wadi ecosystems and consequent reduction in goods and services; and ii) limited evidence-based knowledge of climate change impacts and cost-effective adaptation options in Djibouti. These factors are part of a vicious cycle operating within Djibouti, in which unsustainable land management practices – including over-harvesting of wood and unplanned urban expansion – cause degradation of wadi ecosystems which in turn increases the vulnerability of nearby communities to floods and droughts, reduces agricultural production and threatens livelihoods. The **preferred solution** is to strengthen the capacity of communities and government in Djibouti to plan and implement adaptation strategies that maintain functional wadi ecosystems and decrease the climate vulnerability of local communities to climate change. The result will be to break the above-described vicious cycle and replace it with a virtuous cycle of restored ecosystem function leading to climate-resilient livelihoods; this would allow for the sustainable use of natural resources, which in turn would contribute to the maintenance of ecosystem function.
Estimated duration of project:	*Provide the estimate in months from project kickoff to completion. Do not include time spent on concept or design.* 72 months
Estimated cost of the project :	*Provide the estimated cost for entire project in USD.* USD 8,925,000

II. Environmental Social and Economic Screening Determination

A. Summary of the Safeguard Risks Triggered

Safeguard Standard Triggered by the Project	Impact of Risk[1] (1-5)	Probability of Risk (1-5)	Significance of Risk (L, M, H)
SS 1: Biodiversity, natural habitat and Sustainable Management of Living Resources	3	2	M
SS 2: Resource Efficiency, Pollution Prevention and Management of Chemicals and Wastes	3	2	M
SS 3: Safety of Dams	2	2	L
SS 4: Involuntary resettlement	3	2	M
SS 5: Indigenous peoples	2	3	M
SS 6: Labor and working conditions	1	1	L
SS 7: Cultural Heritage	1	1	L
SS 8: Gender equity	2	1	L
SS 9: Economic Sustainability	1	2	L
Additional Safeguard questions for projects seeking GCF-funding (Section IV)			

B. ESE Screening Decision[2] (Refer to the UNEP ESES Framework (Chapter 2) and the UNEP's ESES Guidelines.)

Low risk **X Moderate risk** High risk Additional information required

C. Development of ESE Review Note and Screening Decision:

Prepared by: Name: ____Eva Comba_____ Date: April 12, 2020

Safeguard Advisor: Name: _____ Date: _____

Project Manager: Name: Eva Comba (Portfolio Manager: Jessica Troni)

Date: April 12,2020

III. ESES Principle and Safeguard checklist

Precautionary Approach
The project will take precautionary measures even if some cause and effect relationships are not fully established scientifically and there is risk of causing harm to the people or to the environment.
Human Rights Principle
The project will make an effort to include any potentially affected stakeholders, in particular vulnerable and marginalized groups; from the decision making process that may affect them.
The project will respond to any significant concerns or disputes raised during the stakeholder engagement process.
The project will make an effort to avoid inequitable or discriminatory negative impacts on the quality of and access to resources or basic services, on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups.[3]

Screening checklist	**Y/N/ Maybe**	**Comment**
Safeguard Standard 1: Biodiversity, natural habitat and Sustainable Management of Living Resources		

Will the proposed project support directly or indirectly any activities that significantly convert or degrade biodiversity and habitat including modified habitat, natural habitat and critical natural habitat?	N	Land-use planning and the choice of adaptation interventions will be guided by the results of multi-sectoral climate change risk and vulnerability assessment that will integrate an assessment of key ecosystems and natural resources. The goal of all project interventions including hard infrastructure and ecosystem-based options will be to restore and support well-functioning natural wadi ecosystems and oasis habitats. EIAs - including the identification of mitigation measures, if needed – and other necessary assessments will be conducted prior to the implementation of the infrastructure interventions, to ensure that they do not cause any loss of precious ecology or ecological functions
Will the proposed project likely convert or degrade habitats that are legally protected?	N	
Will the proposed project likely convert or degrade habitats that are officially proposed for protection? (e.g.; National Park, Nature Conservancy, Indigenous Community Conserved Area, (ICCA); etc.)	N	
Will the proposed project likely convert or degrade habitats that are identified by authoritative sources for their high conservation and biodiversity value?	N	
Will the proposed project likely convert or degrade habitats that are recognized- including by authoritative sources and /or the national and local government entity, as protected and conserved by traditional local communities?	N	
Will the proposed project approach possibly not be legally permitted or inconsistent with any officially recognized management plans for the area?	N	

Will the proposed project activities result in soils deterioration and land degradation?	N	The project aims at improving land and soils quality to support climate-resilient livelihoods through the restoration and sustainable management of natural ecosystems. Project activities will increase soil stability and water infiltration by planting and maintaining beneficial drought- and pest-resilient tree species in the project areas and constructing key infrastructures thereby reducing erosion and siltation.
Will the proposed project interventions cause any changes to the quality or quantity of water in rivers, ponds, lakes or other wetlands?	N	The gabion walls, boreholes, sand dams and rainwater tanks that will be supported by the project in Gobaad plain will benefit natural ecosystems through increasing the availability of surface and ground water. The necessary studies and assessments will be done to ensure that that ecological opportunities are not impaired but adequately strengthened.
Will the proposed project possibly introduce or utilize any invasive alien species of flora and fauna, whether accidental or intentional?	Maybe	The project will explore the use of invasive Prosopis spp. and/or other relevant species as an alternative source of energy in both regions of intervention. This approach has been evaluated by the FAO (2018) in Djibouti and recommended as best practice to address energy needs as well as the rapid spread of this invasive alien species. Its production will be strictly supervised and managed based on lessons learned coming out of past experiences in the country. Its controlled use will contribute to the protection and conservation of key ecosystems and natural habitat.
Safeguard Standard 2: Resource Efficiency, Pollution Prevention and Management of Chemicals and Wastes		

Will the proposed project likely result in the significant release of pollutants to air, water or soil?	N	No pollution will be generated by the project activities
Will the proposed project likely consume or cause significant consumption of water, energy or other resources through its own footprint or through the boundary of influence of the activity?	Maybe	The project will promote climate resilient livelihood activities including agro-pastoralism and sustainable woodlot. For those activities, ground and rain water will be required. The consumption of water will be maintained to a sustainable level thanks to the promotion of water management practices and drought-resilient agricultural techniques including agroforestry, sustainable fodder production, best-practice irrigation and soil conservation, sustainable use of non-timber forest products. In parallel, other project interventions will aim at increasing the availability of surface and ground water through key infrastructure combined with EbA to restore wadi banks and maintain restored areas
Will the proposed project likely cause significant generation of Green House Gas (GHG) emissions during and/or after the project?	N	Project activities are likely to reduce the atmospheric concentration of greenhouse gases in project sites. Specifically, multiple tree species will be planted over at least 400 hectares of degraded woodlands, increasing soil and plant carbon sequestration.
Will the proposed project likely generate wastes, including hazardous waste that cannot be reused, recycled or disposed in an environmentally sound and safe manner?	N	No hazardous waste will be generated by the project activities.
Will the proposed project use, cause the use of, or manage the use of, storage and disposal of hazardous chemicals, including pesticides?	N	Agricultural activities will promote the use of organic pesticide harmless for the environment and easily accessible for the remote rural communities

Will the proposed project involve the manufacturing, trade, release and/or use of hazardous materials subject to international action bans or phase-outs, such as DDT, PCBs and other chemicals listed in international conventions such as the Stockholm Convention on Persistent Organic Pollutants or the Montreal Protocol?	N	
Will the proposed project require the procurement of chemical pesticides that is not a component of integrated pest management (IPM)[4] or integrated vector management (IVM)[5] approaches?	N	
Will the proposed project require inclusion of chemical pesticides that are included in IPM or IVM but high in human toxicity?	N	Agricultural activities will promote the use of organic pesticide harmless for the environment and easily accessible for the remote rural communities
Will the proposed project have difficulty in abiding to FAO's International Code of Conduct[6] in terms of handling, storage, application and disposal of pesticides?	N	
Will the proposed project potentially expose the public to hazardous materials and substances and pose potentially serious risk to human health and the environment?	N	
Safeguard Standard 3: Safety of Dams		
Will the proposed project involve constructing a new dam(s)?	Maybe	The project will look at rehabilitating/strengthening/constructing small-scale grey infrastructure. Those could include gabion walls, canals and microdams to protect Tadjourah Ville against floods as well as sand dams to increase rainwater infiltration and reduce soil erosion in Dikhil region promoting water recharge. The selection and design of small-scale grey infrastructure will be based on lessons learned and best practices from similar past/ongoing initiatives. In preparation for these interventions, EIAs will be conducted. More precise information will be available at PPG stage.
Will the proposed project involve rehabilitating an existing dam(s)?	Maybe	Same as above
Will the proposed project activities involve dam safety operations?	Maybe	Same as above

Safeguard Standard 4: Involuntary resettlement		
Will the proposed project likely involve full or partial physical displacement or relocation of people?	Maybe	No relocation of people will be required or supported by the project, however the creation of key infrastructure for flood protection in Tadjourah or water catchment and recharge in Dikhil could lead to some voluntary movement or relocation of population. For example, some pastoralists could be drawn to temporarily settle nearby a new borehole during dry/hot season to access water resources. Those potential movements of population and their impacts will be further analyzed during the PPG phase based on previous experiences and thanks to consultations with key national and local stakeholders
Will the proposed project involve involuntary restrictions on land use that deny a community the use of resources to which they have traditional or recognizable use rights?	Maybe	The project will support rehabilitation, protection and conservation of key wadi ecosystems. This could imply the introduction of new restrictions about cutting trees in some areas for example. However, those restrictions will be put in place and enforced by the communities and some alternative options will be introduced to sustain existing livelihoods such as charcoal / firewood production through sustainable practices.
Will the proposed project likely cause restrictions on access to land or use of resources that are sources of livelihood?	Maybe	Same as above
Will the proposed project likely cause or involve temporary/permanent loss of land?	N	
Will the proposed project likely cause or involve economic displacements affecting their crops, businesses, income generation sources and assets?	N	
Will the proposed project likely cause or involve forced eviction?	N	

Will the proposed project likely affect land tenure arrangements, including communal and/or customary/traditional land tenure patterns negatively?	N	
Safeguard Standard 5: Indigenous peoples[7]		
Will indigenous peoples be present in the proposed project area or area of influence?	N	No indigenous people are present in project area
Will the proposed project be located on lands and territories claimed by indigenous peoples?	N	
Will the proposed project likely affect livelihoods of indigenous peoples negatively through affecting the rights, lands and territories claimed by them?	N	
Will the proposed project involve the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	N	
Will the project negatively affect the development priorities of indigenous peoples defined by them?	Maybe	The communities in the Gobaad plain are pastoralists traditionally, but these livelihoods are being challenged by climate change: higher temperatures and covariate droughts in the region which reduces the viability of pastoralism in the country. To develop community adaptive capacity, the project will promote climate resilient livelihood activities including agro-pastoralism and sustainable woodlot. Activities will be implemented through self-selected beneficiaries based on a participatory and gender-equitable community process.
Will the project potentially affect the traditional livelihoods, physical and cultural survival of indigenous peoples?	Maybe	As above.
Will the project potentially affect the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices?	N	
Safeguard Standard 6: Labor and working conditions		

Will the proposed project involve the use of forced labor and child labor?	N	The project conforms to all national and international guidelines and laws regarding forced labour. Extensive community engagement will prevent the use of forced labour, and all required labour (short-term employment only, for meeting specific objectives) will be provided through community engagement and remunerated in accordance with national law.
Will the proposed project cause the increase of local or regional un-employment?	N	
Safeguard Standard 7: Cultural Heritage		
Will the proposed project potentially have negative impact on objects with historical, cultural, artistic, traditional or religious values and archeological sites that are internationally recognized or legally protected?	N	
Will the proposed project rely on or profit from tangible cultural heritage (e.g., tourism)?	N	
Will the proposed project involve land clearing or excavation with the possibility of encountering previously undetected tangible cultural heritage?	N	
Will the proposed project involve in land clearing or excavation?	N	
Safeguard Standard 8: Gender equity		

Will the proposed project likely have inequitable negative impacts on gender equality and/or the situation of women and girls?	N	Gender equity will be considered at all stages of the design and implementation of the proposed LDCF project during the PPG phase, contributing to realising the objectives of the National Policy for the Integration of Women into Development. The PPG phase will incorporate a gender gap analysis, to inform inclusivity and gender equity in project activities. Gender will be considered when designing the project activities to promote involvement of women in decision-making processes and implementation of the project activities. Gender disaggregated targets will be developed and used to monitor indicators, where appropriate
Will the proposed project potentially discriminate against women or other groups based on gender, especially regarding participation in the design and implementation or access to opportunities and benefits?	N	Same as above
Will the proposed project have impacts that could negatively affect women's and men's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services?	N	Same as above
Safeguard Standard 9: Economic Sustainability		

Will the proposed project likely bring immediate or short-term net gain to the local communities or countries at the risk of generating long-term economic burden (e.g., agriculture for food vs. biofuel; mangrove vs. commercial shrimp farm in terms of fishing, forest products and protection, etc.)?	N	All project activities will provide both short term and long-term benefit to the beneficiaries. Benefits will be achieved through: i) building capacities of local authorities and vulnerable communities to plan for adaptation ii) implementing adaptation technologies including both green and grey technologies iii) training local communities on adaptation technologies using a learning-by-doing approach; iv) improving evidence-based knowledge on climate change impacts and on cost-effective adaptation options in Djibouti; and v) increasing awareness of the national and local government staff, and local communities on climate change adaptation and adaptation opportunities.
Will the proposed project likely bring unequal economic benefits to a limited subset of the target group?	Maybe	Livelihood activities such as agro-pastoralism and aviculture will be promoted among the most vulnerable groups within the identified communities. Beneficiaries of those activities will be identified by the community chiefs in consultations with community members based on interest and availability to participate to the different training and engage in the activities. Particular attention will be paid to the participation of women. Other project activities such as EbA and hard infrastructure for flood or drought protection will benefit the community/city as a whole and will provide long-term undifferentiated benefit.

[1] This will be done through the organisation of bi-annual meetings of multi-sectoral steering committees and through holding regular technical committees.

6. Coordination

Outline the institutional structure of the project including monitoring and evaluation coordination at the project level. Describe possible coordination with other relevant GEF-financed projects and other initiatives.

A.5. Coordination

The proposed LDCF project will be implemented by a Project Management Unit (PMU) headed by a national project coordinator supported by an administrative assistant, a finance officer and an international Chief Technical Advisor (CTA). The PMU will be hosted and supervised by the Directorate of Land Management and Environment (MHUE/DATE) of the Ministry of Urbanism, Habitat, Environmental and Land-use Planning that is the project Executing Entity. Human resources, financial management, procurement, technical work, coordination as well as reporting will be led by the PMU and supervised by the executing entity with UNEP support and guidance when required. Synergies on administrative and financial issues with other projects under implementation will be facilitated by the MHUE/DATE to save time and resources when possible. Given the size of the project, the PPG phase will look carefully at options to design the country level execution structure to deliver higher amounts of funds. UNEP will not serve in an executing role. As the project Implementing Agency, UNEP will provide oversight, capacity building and training to the project team to promote efficient and effective implementation and achieve high impact. The national project coordinator, the CTA and the UNEP task manager will work in close collaboration through coordination meetings held every two weeks and regular supervisory missions to project sites.

In addition, numerous GEF and non-GEF national projects that focus on adaption to climate change are currently being implemented or under development in Djibouti. These projects will provide information on relevant, cost-effective adaptation interventions – including EbA – as well as lessons learned that can guide the adaptation planning process in the two targeted regions. The proposed LDCF project will focus on collating and synthesising the lessons learned from these projects to inform its design and to disseminate these lessons to government and the public. This approach will maximise synergies and avoid duplication of activities. These initiatives are described below.

The **Strategy of Accelerated Growth and Promotion of Employment** (SCAPE)[1] was initiated in 2015 for a period of four years. Funded by the GoD[2], the strategy aims at improving livelihoods and socio-economic development based on sustained economic growth in Djibouti. SCAPE includes four pillars: i) economic growth with a leading role of the private sector; ii) human capital development; iii) institutional capacity building; and iv) regional sustainable development. The 4th pillar of SCAPE supports the decentralisation process in Djibouti. Under this process, regional authorities will be trained and capacitated to oversee urban and territorial development policies as well as environmental management plans – including climate change adaptation and biodiversity-related matters. SCAPE supports *inter alia*: i) strengthening institutional capacities; ii) facilitating the incorporation of climate change adaptation into planning and development programs; iii) rehabilitation of degraded ecosystems; iv) supporting agropastoral production; and v) promoting micro-finance institutions. In the region of Dikhil where the Gobaab plains are found, regional policies will target the modernisation of agricultural plots, increased livestock productivity and the strengthening of agricultural cooperatives. In the region of Tadjourah, regional policies will target urban development that takes natural disasters such as floods into account. The total budget attributed to the decentralisation process in Tadjourah and Dikhil is estimated at US$14,400,000. A second SCAPE will be prepared for the period 2020-2025 to continue the decentralisation process in Djibouti, while fostering the goals of Djibouti Vision 2035 strategy.

All three Components of the proposed LDCF project will build on the activities of the 4th pillar of the SCAPE 1. The capacity building process initiated among local institutions by SCAPE will enable the use of evidence-based knowledge on climate change risks, and best-practice adaptation options, generated through the three Components of this proposed LDCF project. The implementation of EbA combined with hard infrastructure to support climate-resilient agropastoral and development activities in urban and rural areas of Djibouti – implemented under Components 1 and 2 of the proposed project – will demonstrate the benefits of such interventions on local development such as the improved access to water for climate-resilient agropastoral activities and the reduction of flood impacts on infrastructure. These interventions will contribute to climate-resilient development in Gobaad Plain and Tadjourah Ville. Benefits will be monitored and lessons learned compiled to inform policies and development processes in both regions. The regional authorities in Gobaad Plain and Tadjourah Ville, which capacities would have been strengthened through SCAPE, will be able to use this information for policy revision and development planning, in line with Djibouti Vision 2035 strategy. These interventions will also be replicable in other urban and rural regions of Djibouti, as the strategy is building the capacities of regional authorities across the country. Finally, under Component 3 of the proposed LDCF project, evidence-based information of climate change impacts and best-practice adaptation options will be generated to inform the development of regional policies in and beyond the targeted regions.

Implementing adaptation technologies in fragile ecosystems of Djibouti's central plain is a GEF/LDCF-funded project (LDCF 2). The project – executed by the MHUE in close collaboration with other relevant ministries with UNEP as implementing agency – started in 2014 and will run until 2021. The objective of the project is to implement interventions that protect human populations, maintain productive assets and enhance ecosystem resilience for adaptation to climate change in the regions of Hanlé and Tadjourah. Stakeholders from the LDCF 2 project will be consulted to promote complementarity of activities and avoid duplication. There are a number of complementary interventions between the projects. Firstly, the proposed LDCF project will complement the LDCF 2 project by generating evidence-based knowledge of climate-related changes and impacts, with a focus on Tadjourah Ville and Gobaad Plain. Secondly, the national awareness of school children – which will be increased by the LDCF 2 project – will be built on through: i) the national awareness campaign of the proposed LDCF project that will target the broader population; and ii) the training programmes. Thirdly, lessons learned and best practices developed during implementation of on-the-ground activities of the LDCF 2 project – such as the restoration/establishment of agropastoral plots and EbA and the promotion of alternative economic activities like poultry raising – will be compiled and used to guide the interventions of the proposed LDCF project. The recommendations made in the project's mid-term review (2019) served to inform the development of this PIF and will be integrated in the Project Document. Lastly, the on-the-ground interventions of the proposed LDCF project have been designed to complement and upscale those of the LDCF 2 project (see Section A.1.4).

A GCF NAP proposal under the readiness and preparatory programme has been developed by UNDP to mainstream climate change adaptation into Djibouti's planning and budgeting processes. The GCF NAP proposal is built around three main components: (i) facilitating medium- and long-term adaptation planning by strengthening the coordinating mechanisms and identifying SCAPE adaptation response measures; (ii) climate-proofing SCAPE through the development and piloting of planning and budgeting guidelines at national and regional levels; (iii) strengthening M&E and reporting mechanisms for CCA to track the effectiveness of climate actions and financing. By enhancing evidence-based knowledge of climate change impacts and best adaptation technologies and by building capacities at the national, and local levels to plan for climate change adaptation, the proposed LDCF project will built strong bases for and complement the NAP process in Djibouti. The regional multi-sectoral climate risk and vulnerability analyses developed for Tadjourah and Dikhil will complement the sectoral vulnerability assessments developed at country level through the NAP. Moreover, the adaptation priorities identified in Tadjourah and Dikhil regional and urban adaptation plans will feed into the National Adaptation Planning process promoting a bottom up approach.

Finally, the MHUE/DATE recently set-up a coordination mechanism with its adaptation projects (LDCF projects and one completed Adaptation Fund project). The deputy director of the MHUE/DATE holds on a monthly basis a coordination meeting to deepen collaboration/synergies within the projects. There is a willingness to further enhance

lessons learnt between the different projects with potential regional common workshops to be organized as well as common communication strategy plan. Coordination with projects including an adaptation component and managed outside of the MHUE/DATE will be ensured through regular Project Steering Committee meetings including different ministries and stakeholders working on adaptation in different sectors. This more global coordination - including with GCF projects currently in the pipeline - could however be further strengthened with the creation of a coordination mechanism for climate change adaptation projects[3]. Coordination efforts could be complemented, based on Djibouti LDCF-2 lessons learned, by bilateral meetings between adaptation project teams on regular basis looking at day-to-day project execution and exchange of good practices and lessons learned.

---

[1] Strategy of Accelerated Growth and Promotion of Employment (SCAPE). 2015–2019. Republic of Djibouti.

[2] Funding contributions will be sources from the state, technical and financial partners, private sector and public-private partnerships.

[3] To be further developed in the Prodoc

7. Consistency with National Priorities

Is the Project consistent with the National Strategies and plans or reports and assesments under relevant conventions

Yes

If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc

A.6. Consistency with National Priorities

The proposed LDCF project will support the achievement of the Sustainable Development Goals in Djibouti. In particular, the proposed interventions will contribute to SDG:

1. End poverty in all its forms everywhere

2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture

3. Ensure healthy lives and promote well-being for all at all ages

5. Achieve gender equality and empower all women and girls

6. Ensure availability and sustainable management of water and sanitation for all

7. Ensure access to affordable, reliable, sustainable and modern energy for all

9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

11. Make cities and human settlements inclusive, safe, resilient and sustainable

13. Take urgent action to combat climate change and its impacts*

14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development

15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Djibouti's **National Adaptation Programme of Action** (NAPA) has a number of priorities, which the proposed LDCF project is aligned with, namely: i) mitigation of climate change related risks in coastal areas (Priority 1); ii) implementation of restoration and management actions adapted to surface water (Priority 3); iii) improvement of rangeland management to mitigate the risks associated with traditional extensive livestock (Priority 4); and iv) promotion of the integrated agro-pastoral industry and the development of irrigation techniques to control the salinization of soils (Priority 5). Moreover, the proposed LDCF project will contribute to overcoming barriers to effective adaptation as identified in the NAPA. These barriers include: i) inefficient prevention mechanisms of natural disasters; ii) ecosystem degradation; and iii) limited institutional and technical capacity to plan for adaptation.

The objective of Djibouti's **Vision 2035** is to achieve sustainable development through the promotion of: i) renewable energy; ii) sustainable water management; and iii) adaptation to climate change and risk management. The proposed LDCF project will contribute to realising this objective by promoting consideration of climate change into planning for development at national, regional and local levels. Moreover, the project will implement adaptation technologies and promote techniques for: i) climate-resilient agroforestry and fishery; and ii) solar technology.

Initiated in 2015 'Strategy of Accelerated Growth and Promotion of Employment' (SCAPE, 2015-2019) is the first operational deployment for Vision 2035. It aims at improving livelihoods and socio-economic development based on sustained economic growth in Djibouti through four pillars: i) economic growth with a leading role of the private sector; ii) human capital development; iii) institutional capacity building; and iv) regional sustainable development. With its last pillar, SCAPE supported the decentralisation process in Djibouti. As SCAPE ends in 2019, a follow-up initiative will be implemented for the period 2020-2025. Moreover, the decentralisation process in Djibouti is supported through other initiatives. The proposed LDCF project will contribute the successful implementation of Djibouti Vision 2035 by:

- Strengthening capacity of national and local authorities to plan and integrate climate change adaptation into development planning and decentralisation process
- Increasing evidence-based knowledge of climate change impacts and best-practice adaptation options.
- Raising awareness on the benefits of EbA to restore *Acacia* woodlands, coastal and oasis ecosystems.

Increasing resilience of fish stocks, rangelands, grazing reserves and fodder banks to drought and floods that threaten the economic development gains in Djibouti

Djibouti developed its **Initial National Communication** (INC) to the UNFCCC in 2001. The **Second National Communication** (SNC) was developed in 2013. The SNC includes recommendations for adaptation to climate change including: i) conservation and restoration of marine and forest ecosystems; ii) strengthening human and institutional capacity; and iii) integrating interventions into social and economic development. The proposed LDCF project is therefore well aligned with the Second National Communication.

Djibouti's **Intended Nationally Determined Contribution (INDC – 2015)** highlights the country's commitment to combat climate change. Through this programme, the government of Djibouti has committed to reduce GHG emissions by 40% by 2030. This will be achieved combining mitigation measures with sustainable development measures. The government has also identified priority objectives for adaptation which include: i) reduced vulnerability to drought; ii) improved access to water; iii) enhanced protection of biodiversity; and iv) enhanced resilience of rural populations. These objectives – which will be redefined and confirmed through the NAP process[1] – will be supported by the proposed LDCF project, which will increase investments in adaptation measures that are crucial for Djibouti.

In 2002, the **National Programme for Sanitary Development** (PNDS[2]) was developed with five main priorities: i) improve the organisation, management and functioning of the health system; ii) adapt the functioning and quality of health services to meet population needs; iii) adapt financial resources to the health system requirements; iv) add value to and develop human resources according to health system requirements; and v) increase availability and accessibility of quality medicine. The proposed LDCF project will promote development of the health sector by reducing the negative effects of climate-related hazards such as: i) reduced water quality and availability; and ii) increased frequency and severity of floods.

The proposed LDCF project is aligned with priorities identified in the **National Initiative for Social Development** (INDS). These include: i) increasing water availability; and ii) developing agropastoral systems.

The activities of the proposed LDCF project in the coastal city of Tadjourah are also aligned with the **Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden** (PERSGA). Similarly, the project is aligned with the **National Law on Environment**[3] (NLE) adopted in 2000 (Law n°106/AN/00/4ème L). The NLE protects and promotes the restoration of environmental resources as well as the reduction of future ecosystem degradation.

The **United Nations Development Assistance Framework** (UNDAF) identifies a number of barriers to Djibouti's overall development. These include food security and access to potable water. The proposed LDCF project will contribute to overcoming these barriers by: i) establishing climate-resilient agropastoralism and groundwater recharge in Gobaad Plain; ii) constructing flood-protection infrastructure in Tadjourah Ville; and iii) implementing EbA in Gobaad Plain and Tadjourah Ville.

The main objective of the **Strategic Programme and National Action Plan for Djibouti** (2006) is to protect renewable natural resources. The proposed LDCF project will contribute to this overarching objective by implementing EbA and promoting conservation agriculture.

The proposed LDCF project is aligned with the **National Programme against Desertification**[4] (PNLD) implemented by the MAPE-RH. In particular, PNLD promotes: i) sustainable use of natural resources; and ii) socio-economic activities in rural areas.

[1] A NAP proposal has been submitted to the GCF by UNDP in 2018.

[2] Programme National de Développement Sanitaire.

[3] Loi-cadre sur l'Environnement.

[4] Programme National de Lutte contre la Diversification.

8. Knowledge Management

Outline the Knowledge management approach for the Project, including, if any, plans for the Project to learn from other relevant Projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

A.7. Knowledge Management

The proposed LDCF project will address knowledge management under Components 1, 2 and 3. Firstly, evidence-based knowledge[1] will be generated from the vulnerability assessments implemented in the two project sites, under Components 1 and 2. Secondly, the benefits generated by the adaptation interventions implemented in Gobaad Plain and Tadjourah Ville – Components 1 and 2 – will be monitored, and best practices and lessons learned compiled and shared to inform policy development processes. Thirdly, further knowledge on climate change impacts in wadi ecosystems and adaptation options will be generated in the research programme, implemented under Component 3. Under this Component, information will be collated from interventions of past and current aligned initiatives as well as from the proposed interventions of the project. Therefore, this project will generate – and facilitate access to – critical knowledge for managing wadi ecosystems, degradation processes and climate change impacts in a rural and urban settings of Djibouti. This will create an enabling environment for policy makers and technical staff in the ministries to access such knowledge and for up-scaling project interventions to other areas of the country. To achieve this, evidence-based knowledge will be disseminated in a manner that is easily accessible to the public and government, including through: i) awareness campaigns; and ii) the online platform established through the LDCF 2 project. Furthermore, the collated evidence-based knowledge will be disseminated to: i) policy- and decision-makers; and ii) relevant researchers, in Djibouti and other countries[2]. Lastly, the project interventions and technical protocols will be informed by lessons learned from past and current aligned initiatives. Details of this coordination will be determined during the PPG phase in consultation with the relevant stakeholders.

---

[1] Including supporting data and information.

[2] For example, through the Africa Adaptation Knowledge Network (AAAKNet).

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 with this template).

Name	Position	Ministry	Date
Dini Abdallah Omar	GEF Operational Focal Point	Ministry of Habitat, Urbanism, and Environment	11/13/2019

ANNEX A: Project Map and Geographic Coordinates

Please provide geo-referenced information and map where the project intervention takes place

Tadjourah Ville: 11.7913° N, 42.8796° E

Goobad Plain: 11°02'12.0"N 42°09'05.0"E