Part I: Project Information

GEF ID
10180

Project Type
FSP

Type of Trust Fund
LDCF

CBIT/NGI
CBIT **No**
NGI **No**

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)
Ministry of Environment and Sustainable Development

Executing Partner Type
Government

GEF Focal Area
Climate Change

Sector
Enabling Activity

Taxonomy

Influencing models, Transform policy and regulatory environments, Strengthen institutional capacity and decision-making, Demonstrate innovative approache, Stakeholders, Beneficiaries, Awareness Raising, Communications, Public Campaigns, Behavior change, Civil Society, Non-Governmental Organization, Community Based Organization, Type of Engagement, Consultation, Participation, Information Dissemination, Local Communities, Gender Equality, Gender Mainstreaming, Women groups, Sex-disaggregated indicators, Gender-sensitive indicators, Gender results areas, Capacity Development, Participation and leadership, Access and control over natural resources, Access to benefits and services, Integrated Programs, Food Security in Sub-Sahara Africa, Integrated Land and Water Management, Smallholder Farming, Resilience to climate and shocks, Agroecosystems, Sustainable Production Systems, Gender Dimensions, Land and Soil Health, Sustainable Cities, Urban Resilience, Urban Biodiversity, Integrated urban planning, Food Systems, Land Use and Restoration, Integrated Landscapes, Landscape Restoration, Comprehensive Land Use Planning, Sustainable Food Systems, Innovation, Capacity, Knowledge and Research, Learning, Indicators to measure change, Adaptive management, Knowledge Generation, Training, Workshop, Targeted Research, Knowledge Exchange, Peer-to-Peer, Field Visit

Rio Markers

Climate Change Mitigation

No Contribution 0

Climate Change Adaptation

Principal Objective 2

Biodiversity

Significant Objective 1

Land Degradation

Significant Objective 1

Submission Date

12/2/2021

Expected Implementation Start

1/2/2023

Expected Completion Date

1/1/2029

Duration

72In Months

Agency Fee($)

847,875.00

A. FOCAL/NON-FOCAL AREA ELEMENTS

Objectives/Programs	Focal Area Outcomes	Trust Fund	GEF Amount($)	Co-Fin Amount($)
CCA-1	Outcome 1.1 Technologies and innovative solutions piloted or deployed to reduce climate related risks and/or enhance resilience	LDCF	7,285,000.00	11,082,000.00
CCA-3	- Outcome 3.1 Climate resilient planning enabled by stronger climate information decision-support services and other relevant analysis	LDCF	1,640,000.00	6,030,500.00
		Total Project Cost($)	**8,925,000.00**	**17,112,500.00**

B. 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	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
1. Resilience to droughts and floods in rural areas of Dikhil region	Investment	1. Increased resilience of local communities and ecosystems in Dikhil to the effects of climate change, particularly more frequent and severe droughts and floods	1.1 At least 50 gardens with increased water access and protected against flood through grey infrastructure in As Eyla 1.2 At least 120 ha of degraded wadi banks reforested to increase water availability, reduce soil erosion and flood risks in Dikhil (Gobaad & Hanle) 1.3 At least 213 rural households of Dikhil capacitated to implement climate-resilient agriculture that provide crops, fruits and sustainable fodder 1.4 Three agricultural cooperatives supported through processing capability and business management skills to improve the sale of climate-resilient agriproducts and increase	LDCF	3,632,100.00	6,399,500.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
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	2.1 20,000 people protected against floods through grey infrastructure in Tadjourah Ville 2.2 Output 2.2 50 ha of degraded wadi banks reforested to reduce soil erosion and flood risks in protect against floods in Tadjourah-Ville 2.3 200 women and 50 men supported to establish climate-resilient economic activities such as fodder production, sustainable charcoal, craft-making 2.4 At least 96 rural households of Tadjourah capacitated to implement climate-resilient agriculture that provide crops, fruits and sustainable fodder	LDCF	3,261,900.00	4,275,500.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
3. Capacity-building, knowledge and awareness-raising	Technical Assistance	3. Evidence-based knowledge, and awareness of EbA benefits to inform policies and practices and upscale adaptation at local, regional and national levels	3.1 Two multi-sectoral climate change risk and vulnerability assessments and risk maps produced in Dikhil and Tadjourah regions 3.2 Cost-benefits and economic valuation analysis of project reforestation activities 3.3 Local adaptation plan developed for the Gobaad Plain and Tadjourah-Ville in a participatory way 3.4 At least 10 awareness raising events and products on EbA and benefits of wadis ecosystems for behaviour change 3.5 Sustainability and scaling-up approach for the project established, through capacity	LDCF	1,249,000.00	5,623,500.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Project M&E		Project M&E		LDCF	368,000.00	
			Sub Total ($)		**8,511,000.00**	**16,298,500.00**
Project Management Cost (PMC)						
			LDCF	414,000.00		814,000.00
			Sub Total($)	**414,000.00**		**814,000.00**
			Total Project Cost($)	**8,925,000.00**		**17,112,500.00**

Please provide justification

C. 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($)
Donor Agency	European Union	Grant	Investment mobilized	6,272,000.00
GEF Agency	IFAD	Grant	Investment mobilized	2,767,000.00
Donor Agency	European Union	Grant	Investment mobilized	5,400,000.00
GEF Agency	IFAD	Grant	Investment mobilized	2,002,000.00
GEF Agency	UNEP	In-kind	Recurrent expenditures	100,000.00
GEF Agency	UNEP	In-kind	Recurrent expenditures	300,000.00
Recipient Country Government	Ministry of Environment and Sustainable Development (MEDD)	In-kind	Recurrent expenditures	102,500.00
Recipient Country Government	Regional Council of Dikhil	In-kind	Recurrent expenditures	84,500.00
Recipient Country Government	Regional Council of Tadjourah	In-kind	Recurrent expenditures	84,500.00
			Total Co-Financing($)	**17,112,500.00**

Describe how any "Investment Mobilized" was identified

Co-finance was identified through extensive discussions with key institutions, donor agencies and organisations in Djibouti. Through these discussions, synergies were identified between the proposed project?s interventions, sites, and beneficiaries and the strategies or initiatives currently implemented or planned by the co-financiers. Please see the Stakeholder Engagement Plan (Section 5 of the Prodoc) for details on stakeholder engagement during the PPG phase. The investment mobilized from IFAD will contribute to improve access to water and fodder for agro-pastoral communities in the target project areas. IFAD will build water retention infrastructure, boreholes, and wells, that will serve to provide water for

domestic use and livestock, as well as irrigation of fodder plots. In addition, IFAD will also invest resources in reforestation in Tadjourah and Dikhil, thereby contributing to the restoration of degraded watersheds and reducing risks of soil erosion and floods. Likewise, the E.U. will invest financial resources in water-related infrastructure to support agro-pastoral activities including irrigated agriculture in Tadjourah and Dikhil. Moreover, the E.U. is contributing to strengthen the capacity of decentralized institutions in Djibouti, including in the project?s two target regions

D. 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($)
UNEP	LDCF	Djibouti	Climate Change	NA	8,925,000	847,875	9,772,875.00
			Total Grant Resources($)		**8,925,000.00**	**847,875.00**	**9,772,875.00**

E. Non Grant Instrument

NON-GRANT INSTRUMENT at CEO Endorsement

Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

F. Project Preparation Grant (PPG)

PPG Required **true**

PPG Amount ($)

200,000

PPG Agency Fee ($)

19,000

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
UNEP	LDCF	Djibouti	Climate Change	NA	200,000	19,000	**219,000.00**
			Total Project Costs($)		**200,000.00**	**19,000.00**	**219,000.00**

Meta Information - LDCF

LDCF true
SCCF-B (Window B) on technology transfer false
SCCF-A (Window-A) on climate Change adaptation false

Is this project LDCF SCCF challenge program?
false

This Project involves at least one small island developing State(SIDS). false

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This Project involves at least one fragile and conflict affected state. false

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This Project will provide direct adaptation benefits to the private sector. false

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This Project is explicitly related to the formulation and/or implementation of national adaptation plans (NAPs). false

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This Project has an urban focus. true

This Project covers the following sector(s)[the total should be 100%]:*

Agriculture	**25.00%**
Natural resources management	**25.00%**
Climate information services	**0.00%**
Coastal zone management	**5.00%**
Water resources management	**15.00%**
Disaster risk management	**25.00%**
Other infrastructure	**5.00%**
Health	**0.00%**
Other (Please specify:)	**0.00%**
Total	**100%**

This Project targets the following Climate change Exacerbated/introduced challenges:*
Sea level rise false
Change in mean temperature false
Increased climatic variability true
Natural hazards true
Land degradation true
Coastal and/or Coral reef degradation false
Groundwater quality/quantity true

To calculate the core indicators, please refer to Results Guidance

Core Indicators - LDCF

CORE INDICATOR 1	Total	Male	Female	% for Women
Total number of direct beneficiaries	0	0	0	0%

CORE INDICATOR 2	
Area of land managed for climate resilience (ha)	0.00

CORE INDICATOR 3	
Total no. of policies/plans that will mainstream climate resilience	0

CORE INDICATOR 4		Male	Female	% for Women
Total number of people trained	0	0	0	0%

OUTPUT 1.1.1

Physical and natural assets made more resilient to climate variability and change

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		Male	Female
Total number of direct beneficiaries from more resilient physical assets	**102,329**	**54,235**	**48,094**

Ha of agriculture land	Ha of urban landscape	Ha of rural landscape	No. of residential houses
168.00	**50.00**	**120.00**	**0**

No. of public buildings	No. of irrigation or water structures	No. of fishery or aquaculture ponds	No. of ports or landing sites
0	**60**	**0**	**0**

Km of road	Km of riverban	Km of coast	Km of storm water drainage

Other	Other(unit)	Comments
0		

OUTPUT 1.1.2

Livelihoods and sources of income of vulnerable populations diversified and strengthened

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		Male	Female
Total number of direct beneficiaries with diversified and strengthened livelihoods and sources of income	**104,977**	**55,638**	**49,339**

Livelihoods and sources of incomes strengthened / introduced			
Agriculture	Agro-Processing	Pastoralism/diary	Enhanced access to markets
true	**false**	**true**	**false**
Fisheries /aquaculture	Tourism /ecotourism	Cottage industry	Reduced supply chain
false	**false**	**false**	**false**
Beekeeping	Enhanced opportunity to employment	Other	Comments
false	**false**	**true**	**poultry, handcraft and green charcoal production**

OUTPUT 1.1.3

New/improved climate information systems deployed to reduce vulnerability to climatic hazards/variability

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Male Female

Total number of direct beneficiaries from the new/improved climatic information systems	**0**	**0**	**0**

Climate hazards addressed

Flood	Storm	Heatwave	Drought
false	**false**	**false**	**false**

Other	Comments
false	

Climate information system developed/strengthened

Downscaled Climate model	Weather/Hydromet station	Early warning system	Other
false	**false**	**false**	**false**

Comments

Climate related information collected

Temperature	Rainfall	Crop pest or disease	Human disease vectors
false	**false**	**false**	**false**

Other	Comments
false	

Mode of climate information disemination

Mobile phone apps	Community radio	Extension services	Televisions
false	**false**	**false**	**false**

Leaflets	Other	Comments
false	**false**	

OUTPUT 1.1.4

Vulnerable natural ecosystems strengthened in response to climate change impacts

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Types of natural ecosystem

Desert	Coastal	Mountainous	Grassland
false	**false**	**false**	**false**

Forest	Inland water	Other	Comments
false	**false**	**true**	**wadi ecosytems**

OUTPUT 1.2.1

Incubators and accelerators introduced

	Male	Female
Total no. of entrepreneurs supported	**0**	

Comments

No. of incubators and accelerators supported

Comments

No. of adaptation technologies supported

OUTPUT 1.2.2

Financial instruments or models to enhance climate resilienced developed

Financial instruments or models			
PPP models **false**	Cooperatives **false**	Microfinance **false**	Risk insurance **false**
Equity **false**	Loan **false**	Other **false**	Comments

OUTPUT 2.1.1

Cross-sectoral policies and plans incorporate adaptation considerations

Will mainstream climate resilience	Of which no. of regional policies/plans	Of which no. of national policies/plan
0		

Sectors			
Agriculture	Fishery	Industry	Urban

false	**false**	**false**	**false**

Rural **false**	Health **false**	Water **false**	Other **false**

Comments

OUTPUT 2.1.2

Cross sectoral institutional partnerships established or expanded

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No. of institutional partnerships established or strengthened

Comments

OUTPUT 2.1.3

Systems and frameworks established for continuous monitoring, reporting and review of adaptation

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No. of systems and frameworks

Comments

OUTPUT 2.1.4

Systems and frameworks established for continuous monitoring, reporting and review of adaptation

---

No. of systems and frameworks

Comments

OUTPUT 2.2.1

No. of institutions with increased ability to access and/or manage climate finance

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No. of institution(s)

Comments

OUTPUT 2.2.2

Institutional coordination mechanism created or strengthened to access and/or manage climate finance

No. of mechanism(s)

Comments

OUTPUT 2.2.3

Global/regional/national initiatives demonstrated and tested early concepts with high adaptation potential

No. of initiatives or technologies

Comments

OUTPUT 2.2.4

Public investment mobilized

Amount of investment
(US$)

Comments

OUTPUT 2.2.5

Private investment mobilized

Amount of investment
(US$)

Comments

OUTPUT 2.3.1

No. of people trained regarding climate change impacts and appropriate adaptation responses

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		Male	Female
Total no. of people trained	**868**	**381**	**487**
		Male	Female
Of which total no. of people at line ministries	**30**	**15**	**15**
		Male	Female
Of which total no. of community/association	**838**	**366**	**472**
		Male	Female
Of which total no. of extension service officers	**0**	**0**	**0**
		Male	Female
Of which total no. of hydromet and disaster risk management agency staff	**0**	**0**	**0**
		Male	Female
Of which total no. of small private business owners	**0**	**0**	**0**
		Male	Female
Of which total no. school children, university students or teachers	**0**	**0**	**0**
Other	Comments		

OUTPUT 2.3.2

No. of people made aware of climate change impacts and appropriate adaptation responses

		Male	Female
No. of people with raised awareness	**0**	**0**	**0**

Please describe how their awareness was raised

OUTPUT 3.1.1

National climate policies and plans enabled including NAP processes by stronger climate information decision-support services

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No. of national climate policies and plans **2**

Comments

Two Regional Adaptation Plans (Tadjourah and Dikhil regions)

OUTPUT 3.1.2

Systems and frameworks established for continuous monitoring, reporting and review of adaptation

No. of systems and frameworks **0**

Comments

OUTPUT 3.1.3
Vulnerability assessments conducted

No. of assessments conducted **2**

Comments

OUTPUT 3.2.1
No. of institutions with increased ability to access and/or manage climate finance

No. of institution(s) **0**

Comments

OUTPUT 3.2.2

Institutional coordination mechanism(s) created or strengthened to access and/or manage climate finance

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No. of mechanism(s) **0**

Comments

OUTPUT 3.2.3

Global/regional/national initiative(s) demonstrated and tested early concepts with high adaptation potential

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No. of initiative(s) or technology(ies) **0**

Comments

OUTPUT 3.3.1

No. of people trained regarding climate change impacts and appropriate adaptation responses

		Male	Female
Total no. of people trained	**0**	**0**	**0**
		Male	Female
Of which total no. of people at line ministries	**0**		
		Male	Female
Of which total no. of community/association	**0**		
		Male	Female
Of which total no. of extension service officers	**0**		
		Male	Female
Of which total no. of hydromet and disaster risk management agency staff	**0**		
		Male	Female
Of which total no. of small private business owners	**0**		
		Male	Female

Of which total no. school children, university students or teachers	**0**

Other	Comments

OUTPUT 3.3.2

No. of people made aware of climate change impacts and appropriate adaptation responses

---

		Male	Female
No. of people with raised awareness	**0**		
Please describe how their awareness was raised			

Part II. Project Justification

1a. Project Description

1a. Project Description.

1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description)

The Republic of Djibouti is a small country of 23 180 km2, located in the Horn of Africa. It is bordered by Somaliland in the south, Ethiopia in the southwest, Eritrea in the north, and the Red Sea and Gulf of Aden in the east. The country?s coastline stretches 314 km, and inland consists mostly of plateau, plains and highlands. The country?s highest mountain range, Mousa Ali, peaks at 2028 m. Within this country, As Eyla and Tadjourah-Ville were selected as project sites because they are located within the two poorest regions of Djibouti (see Figure 3[1][1]); yet, they have a strong potential to drive the country?s development process. As Eyla is a key agricultural centre of Djibouti, despite declines during the past decades, while Tadjourah-Ville is the second most important economic centre of the country (after Djibouti-Ville) with important industrial and tourism potential, but challenged by a fast-growing population.

Gobaad Plain is known as Djibouti?s largest agricultural basin (followed by the Hand Plain), with As Eyla as the epicenter. The vast majority of the population relies on agro-pastoral activities. The main production remains market gardening with tomatoes, onions, chilies, eggplants, watermelon; followed by fodder (*chlorisgayana, panicum maximum, cenchrusciliaris, sorghumsoudanensis*) and fruit trees (palm trees, guava, *Acacia nilotica, Prosopis cineraria, Acacia ereinbergiana, Acacia tortilis et Acacia Asak, Leucaenaleucocephala).* Women essentially rely on the production and sale of vegetables and fruit (melons, watermelons, tomatoes, eggplant, bamias, onions); the production and sale of fruit juice, coffee, meat, pastries, khat, craft (baskets and pots) and wafers. Field missions have indicated that although handicrafts constitute a promising niche that can generate substantial income to compensate for agricultural losses, this is hindered by difficulties in obtaining raw materials for craft making, the lack of marketing skills and technical training. In Tadjourah-Ville the growing population relies on the local resources such as fishing, livestock, agriculture, crafts, and tourism. The unemployment rate of Tadjouah-Ville stands at 56%, especially affecting young people. Women are particularly affected by poverty. In Tadjourah-Ville, they especially rely on handcraft making, which are then sold during exhibition in Tadjourah-Ville and Djibouti-Ville, however they need support to improve their production techniques and skills, as well as to find marketing opportunities. They also sell coffee, patties, samosa, vegetable and donuts sale at the port or along the road; or collect, reuse or sale plastic waste[2][2]. The communities of both regions significantly rely on the goods and services of their wadi ecosystems, which underpin livelihood activities and provide buffer against climate-related hazards.

The problem that the proposed LDCF project seeks to address is the high level of vulnerability to climate change witnessed by communities in As Eyla (Figure 1) and Tadjourah-Ville (Figure 2) due to their over-reliance on key ecosystems that are being degraded and destroyed at an alarming rate. The wadi ecosystems of the Gobaad Plain and Tadjourah-Ville are rapidly degrading because of human

activities compounded by climate change impacts. With ongoing ecosystem degradation, the wadi banks in Gobaad and Tadjourah-Ville are largely bare, which leaves the material mostly sandy and gravelly easily mobilized by the water course, leading to soil erosion, run-off and floods[3][3]. In turns, ecosystem services including soil stabilisation along the wadis are reduced.

Figure 1: Problem tree in As Eyla

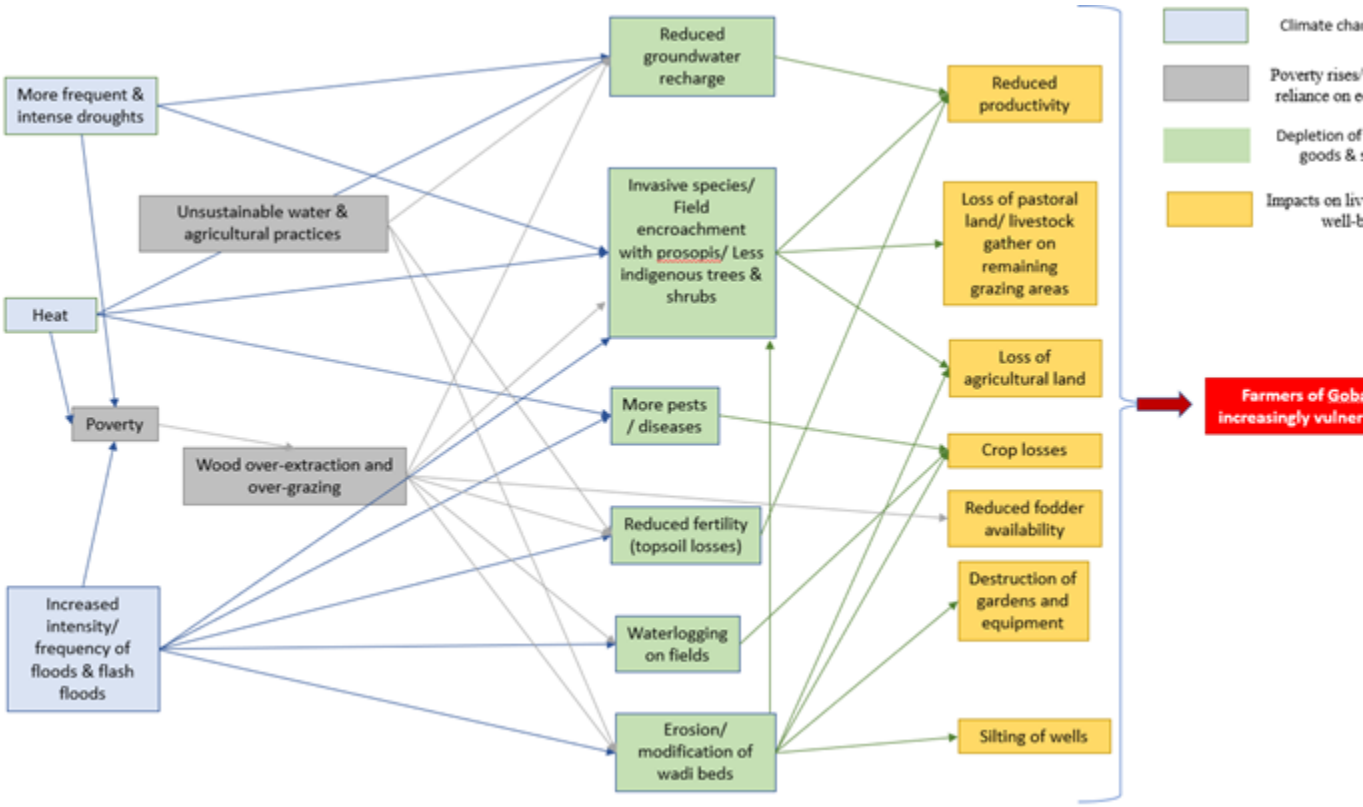


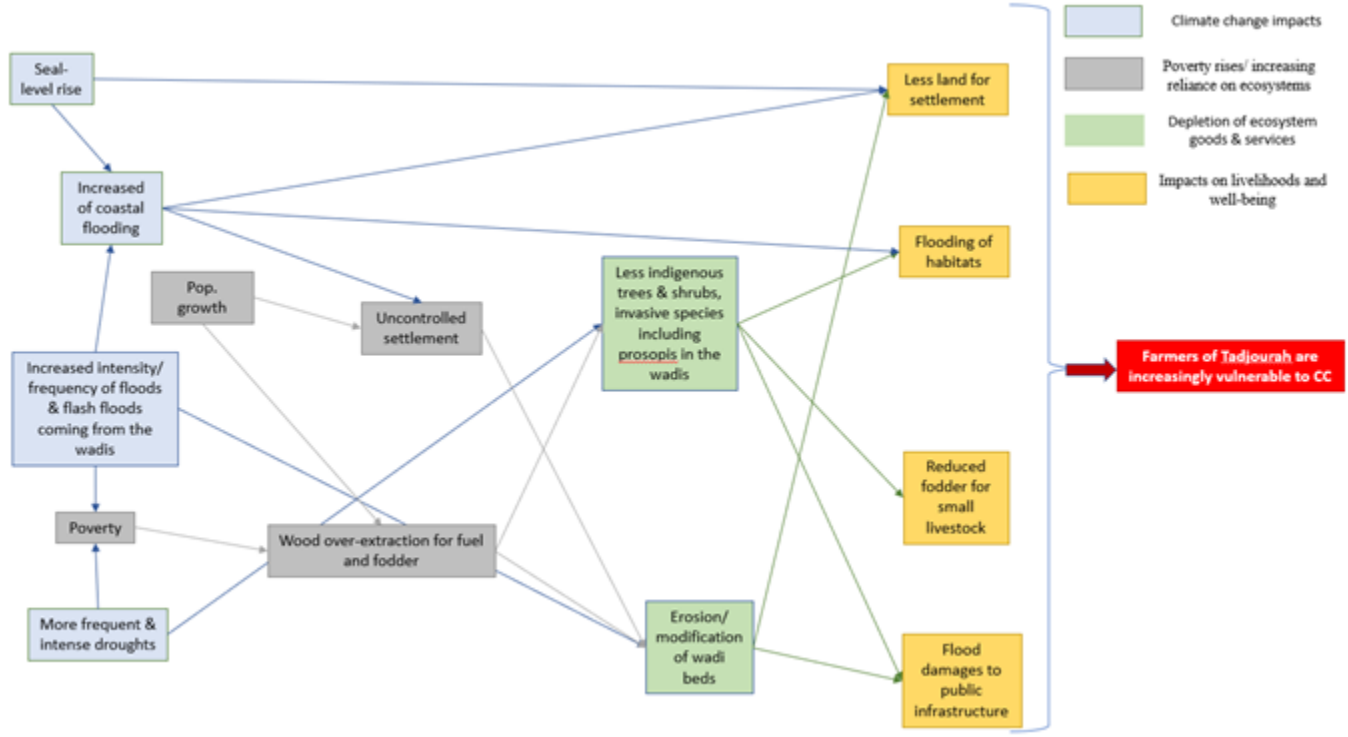
Figure 1 & 2 underline the climate (blue) and non-climate drivers (grey) of climate change vulnerability in As Eyla and Tadjourah, along with their impacts on local ecosystems (green), agricultural systems and livelihoods (yellow). With regards to climate change, in As Eyla, the degradation of the wadi ecosystem is essentially driven by more intense and frequent extreme rainfalls and floods, drought events and increased heat. Floods, in particular, contribute to the strong erosion of the banks and deforestation[4][4]. The vegetation also becomes scarce because of droughts and increased heat. Their effects are compounded by overgrazing on the wadi banks, as fodder is not locally-produced (because of damages to gardens and reduced productivity); and by wood extraction for cooking use. Farmers are not aware of the damages caused by these practices and of the goods and benefits protected ecosystems provide.

As a result of the above-mentioned climate and non-climate drivers, gardens that are located close to the main wadis? bed (because water tables are less deep thus water is more easily accessible, and the soil is more fertile so productivity is increased), are increasingly vulnerable to flood impacts coming from the Gabaad wadi. From Garsal? Daba to Tamiro, the heavily to moderately damaged areas represent a total area of over 150 hectares, of which nearly half is agricultural land; over 5 years, approximately 40m of wadis banks have disappeared through erosion[5][5]. Siltation of artisanal wells is

another key issue, driven by heavy rainfalls and intense soil erosion. This siltation was noted during the field missions and affect most wells in the gardens in Garaytou (8 gardens) and Garsale Daba (15 gardens), which are very close to the middle bed; as well as in the gardens of Sissalou sector (16 gardens), which is now closed to the wadis because of changes in the riverbed.

Crop losses, resulting from soil erosion, fertility loss (also driven by heavy rainfalls washing away top soil) and water scarcity as groundwater recharge is reduced and wells are silted or destroyed, are accentuated by increased temperature, droughts and shift in rainfalls with more frequent extreme rainfalls. In addition, more frequent pest attacks on crops, and the proliferation of invasive species like *prosopis sp*. encroaching fields and competing with crops and other beneficial trees and plants, are noted. Farmers? unsustainable water and agricultural practices, overgrazing of the remaining green land, and extraction of woody plant material for energy and fodder, contribute to productivity decreases. Crop losses, flooding of the gardens, silting of wells, and damages to equipment, lead to migration towards cities, and increase farmers? reliance on unsustainable practices.

Figure 2: Problem tree in Tadjourah-Ville



Likewise, in Tadjourah, more frequent droughts, increased heat and extreme rainfall events contribute to reducing the vegetation, that is key to stabilise the wadi banks. Wadis and their surroundings are becoming more prone to floods, a phenomenon accentuated by uncontrolled settlements on the wadi banks, and over-extraction of the natural resources. New settlements, driven by the important migration flux, are taking place within the city?s natural limits, marked by the coast and its seven wadis. These settlements often take place illegally, in remote areas with limited access to basic services. They target the wadis? banks, which provide water, fodder and wood to the new population. This accentuates the deforestation problem in Tadjourah.

As a result, floods occur more and more frequently, during or after extreme rainfall events, which become more frequent and intense. Extreme rainfalls erode the wadi banks, some of which were protected by dykes and weirs that were not adequately built and have been damaged because of repeated floods and a lack of maintenance. The neighbourhoods of Badouli, Yomatara, Harak, Galasan, Palmarai, Hareto, which comprise 6,000 people, are among the most vulnerable to floods. Lack of habitable space leads to uncontrolled settlement on the wadi banks. As a result, land and vegetation are

cleared, erosion is exacerbated and flood risks significantly increase, especially in the vulnerable neighbourhoods of Marsaki, Badouli, Yomatara, Harak, Galasan, Palmarai, Hareto, Elamo, Cite Alwan, Fia, and Agraf.

Climate drivers of vulnerability

Both regions have experienced temperature increase since the 1970s, higher in the western parts of the country, where Dikhil is located. Based on the CMIP5 (Coupled Inter-comparison Project Phase 5) data ensemble of 32 Global Circulation Models, temperatures in Djibouti will increase of approximately 1?C every two decades, to reach a monthly average increase of + 1.9?C by the 2050s, and as much as 5.4?C by end of the century[6][6].

With regards to precipitations, a publication from Dabar et al. (2021)[7][7] indicates that both regions have received less annual precipitations since 1946, with drastic dry years; a significant rainfall decline was observed especially during the last decade. The study also indicates that rainfall variability has increased in all regions of Djibouti, translating into more periods of droughts transiting with excessive rainfall events. Projections indicate a possible slight increase of annual rainfall amount at the nationally aggregated level until the end of the century. However, an overall reduction is expected during the wet period, which is the grazing period for livestock (usually between September and February) and the main agricultural growing season (September to October). Rainfall reduction (in average annual amount) will especially affect the western part of the country, where Dikhil is located[8][8]. More extreme rainfall events are also expected, combined with increased, longer period of aridity in between periods of rain in both Dikhil and Tadjourah.

The following Table 3 indicates the expected impacts of climate change on water and agriculture.

Table 3: Climate change impacts

Climate change impacts		
	Biodiversity and ecosystem services	**Livelihoods**

Droughts/ heat	? Limited nutrient cycling/ decreases soil nutrition ? Watersheds destabilized/ instability in water cycle ? Altered habitat ranges and shifts in species distribution ? Regression in forest cover and disappearance of endemic species ? Loss of gene pool and phenological patterns ? Invasion of *Prosopis sp*. which is growing very rapidly under increasing aridity Reduction in groundwater resources/ depletion of Djibouti?s main aquifer	*Agriculture*: ? Depletion of ground water used for irrigation ? Overgrazing of shrinking rangelands ? Increased pests and pathogens ? Prosopis encroaching on cultivated land and competing with other beneficial trees and local shrubs *Economic activities:* ? Reduced crop yield, loss of livelihoods and income ? Intensified human pressures on forests for firewood
Floods	? Shift in run-off water regime ? Decreased soil nutrition/ top soil is washed-off ? Erosion of soil including along wadis ? Increased water retention, waterlogging, and soil runoff ? Increased waterborne diseases ? Indigenous trees on riverbanks are torn off ? Introduction of invasive species from other regions	*Agriculture:* ? Heavy rainfalls damage crops and livestock ? Destruction of farms located near the wadis ? Silting of wells or destruction of crops and infrastructure ? Crop loss due to waterlogging on field ? Multiplication of pests and insects (caterpillars, mushrooms, crickets...) destroying crops *Settlement:* ? Flooding or destruction of houses locating nearby wadis *Economic activities:* ? Loss of crops, livelihoods, income, equipment and properties ? Intensified human pressures on forests for firewood

SLR	? Flooding and erosion of coastal land	*Settlement:* ? Loss of habitable land prone to floods

Women in Djibouti are disproportionately affected by climate change impacts. This is because of gender-related roles and responsibilities, as well as a deep economic and social gender divide and their under-representation in decision-making at different levels (see Appendix 13 Gender Assessment). In Dikhil and Tadjourah, during the focus groups, women reported being impacted by climate change in the following ways:

- the volume of water and access to water is increasingly limited because the low rainfall does not allow the water tables to fill up;

- the soil is arid and dry and is difficult to cultivate;

- insects (especially locusts) invade and destroy crops; and

- to the period of drought is added torrential rains which provoke strong floods.

Table 4 describes climate change impacts on women.

Table 4: Direct and indirect impacts of climate change on women

Sector	Impacts of climate change	Impacts on women
Natural Resources and agriculture	- Drought and/or flooding due to temperature changes and unpredictable climate - Decline in soil fertility - Reduced crop yields or crop failure - Scarcity of resources - Lack of clean and safe water	- Increased burden of household work and time spent collecting water, food and fuel such as firewood (sometimes leading to lower primary school enrolment and literacy rates and early marriage) - Increased hunger and reduced calorie intake for women, exposure to contaminated water sources - In areas where there are restrictions on their land ownership rights, they are excluded from access to fertile land - Loss of traditional land tenure

Sector	Impacts of climate change	Impacts on women
Natural disasters	- More unpredictable and intense weather events	- Lack of survival skills commonly taught to boys (e.g. swimming or tree climbing skills) - Women generally excluded from decision-making in post-disaster recovery efforts
Health	- Increase in water-borne or vector-borne diseases (e.g. malaria due to increased temperatures and storms) - Increase in heat-related illnesses - Increased malnutrition - Increased air pollution - Allergies and asthma - Increased mental disorders such as anxiety and depression.	- Pregnant and breastfeeding women, the very young and the very old are the most vulnerable to health risks - Increased lack of health services, immunisation, family planning, reproductive health care in the affected areas - Possible increase in maternal and infant mortality rates due to lack of care - Lack of hygiene services and supplies in emergency shelters for pregnant, lactating and menstruating women
Growth of population	Projected population growth in areas most exposed to severe climate change and where people depend on natural resources for survival	- Conflict over dwindling public and natural resources - Continuing threats to the most vulnerable populations - High fertility rate, affecting women's health
Urbanization	- Increased rural exodus due to degradation of environmental resources - Decline in productivity - Conflicts over resources - Makeshift shelters and community expansion	- Makeshift settlements are sometimes improvised, unhealthy and dangerous, lacking water and sanitation and built on vulnerable land - Tendency of formal urban markets to benefit men more - Lack of access to health services for poor urban women - Projected increase in urban poverty

Sector	Impacts of climate change	Impacts on women
Movements migration and travel of populations	- Disasters can cause displacement, both temporary and permanent, internal and international - Incentives for both women and men to move due to environmental degradation and conflict over resources - Possible forced migration due to regional vulnerability	- Women make up at least half of the world's migrant population, but their needs are not prioritized by migration policies - They often lack the means to move around, but in a post-disaster situation they may lack more to meet household needs - Forced migration may exacerbate women's vulnerability and limited access to resources and livelihood options
Structure of the households	- Deaths due to natural disasters, loss of family members and changes in family structure due to migration/travel	- Increase in the number of female heads of household due to male migration or other factors - Lack of resources for female heads of household in recovery programs/insurance schemes or funds that prioritize women's access - Lack of land rights compromising women's food and livelihood security - Strengthening the gender division of labour - Decrease in women in some households due to female mortality from disasters
Conflict and violence	- Conflicts over scarce resources can lead to antagonism or displacement - Irregular rainfall and scarcity of natural resources can increase the risk of civil war by 50%. - Anxiety and distress increase over insecure livelihoods	- Amplification of gender inequalities as a result of conflict: although there is a high incidence of male deaths and injuries in combat, other consequences of conflict affect women, such as rape and other forms of gender-based violence - High levels of domestic, post-disaster and relief camp violence

Please see Section ?Climate drivers of vulnerability?, on p.26 of the prodoc for full description of the climate problem.

Root causes of vulnerability

The climate change vulnerability of communities in As Eyla and Tadjourah-Ville is linked to ecosystem degradation itself compounded by agricultural land-use (in As Eyla), over-reliance on natural resources (both sites), and unsustainable urban development (in Tadjourah-Ville), which are driven by more structural underlying factors and causes.

Poverty and a lack of economic opportunities are key features of Dikhil and Tadjourah, the two poorest regions of Djibouti (see Figure 2). Unemployment rates in the region of Dikhil stand at 37.8% and extreme poverty rate is estimated at 52.9%, well above the national average. With limited financial resources, farmers of As Eyla are unable to renew old agricultural equipment, replace damaged one, or invest in the required input (e.g. gas for water pumps) to maintain agricultural production. Moreover, interviews indicate that they are reluctant to invest their scarce savings in the agricultural campaigns without technical support, by fear of failure. In Tadjourah, unemployment rates stand at 56%, and affect especially young people. Extreme poverty is estimated at 65.8% of the population and is particularly seen in the peri-urban areas[9][9].

A lack of financial resources in As Eyla and Tadjourah-Ville explains communities? over-reliance on their direct environment to cover their basic needs, like fodder and fuel wood. As a rural area, As Eyla includes many agro-pastoralists with small cattle; likewise the sedentarised migrants, recently settled in Tadjourah, often own goats. Because of the reduction in vegetation and the lack of fodder production at the local level, their cattle tend to concentrate on the few remaining spots with vegetation, thereby accentuating the degradation of the local ecosystems. A lack of access to sustainable energy is another key driver of deforestation in Dikhil and Tadjourah. This is because Djibouti has no indigenous sources of oil, natural gas, hydropower or coal; therefore, energy in Djibouti comes at high cost, among the highest of Africa[10][10]. The production and use of cooking coal and charcoal is therefore the main source of energy, especially amongst the poorest communities, but also for individuals and small business owners like restaurants. This is because the cost of charcoal is very low, sold at USD 6.5 (DJF 1,100) for a 25kg bag. This, in return, contributes to the rapid degradation of key wadi ecosystems.

Finally, in Tadjourah-Ville, pressure on the natural resources is driven by the rapidly growing population. Tadjourah-Ville?s population is growing fast at 9.6% per year, and projected to reach 28,000 people by 2030[11][11]. This results in a constant need of new land for settlement, and natural resources such as fuel wood. Given the geographical situation of the city, limited by its coast (affected by coastal floods) and seven wadis (eroded and prone to floods), land for new settlement is limited. A lack of proper urban planning and control over new settlements result in unorganised growth of peri-urban settlement, spreading over fragile ecosystem areas. These new, poor neighbourhoods have limited access to basic services, thereby accentuating the pressure on their direct environment. This accelerates the ongoing deforestation process, increasing the degradation of the local wadi ecosystems. A lack of basic services in the pauperised areas of Tadjourah-Ville also lead to the accumulation of solid waste in the wadis, drainage and sewage systems of the city. Deforestation, degradation of the wadi ecosystems and obstruction of water courses and drainage systems with solid waste increase flood risks in Tadjourah?s poorest neighbourhoods, as well as within the city. Much of this happened in the absence of comprehensive and long-term urban and resilience planning, most necessary given the rapid population growth that Tadjourah is facing.

The above-mentioned social, economic, and political dynamics explain the land-use changes observed in As Eyla and Tadjourah-Ville, led by poverty and an over-reliance on natural resources to provide

basic services like energy and fodder; the rapid, intense and unplanned urbanization in Tadjourah-Ville further contribute to increased climate change vulnerability in this area. As discussed earlier those dynamics result in the degradation and destruction of key ecosystems and to the reduction of their capacity to support communities especially in time of climate hazards thus increasing vulnerability to climate change.

Preferred solution

The problem that the proposed LDCF project seeks to address is the high level of vulnerability to climate change witnessed by communities of As Eyla and Tadjourah-Ville due to their over-reliance on key ecosystems that are being degraded and destroyed at an alarming rate. The communities and local authorities in these regions are not able to cope with, or adapt to more frequent and intense climate-related hazards. Solutions should combine green adaptation options such as reforestation with grey infrastructure, which provide rapid response to climate-related shocks; while also taking gender-differentiated capacities and needs into consideration. In As Eyla and Tadjourah-Ville (Figure 3 & 4), reforestation interventions will serve to fix eroded areas of the wadi banks, restore the vegetation cover, and increase water infiltration to improve groundwater recharge, using local plants including grasses, shrubs and trees. Where essentially needed and other planting measures are not suitable, gabion walls will be constructed or rehabilitated, to complement and strengthen green adaptation options. Furthermore, in As Eyla, wells and underground water cisterns combined with targeted reforestation interventions will be promoted to improve capture of rainfalls and run-off, water infiltration and provision for agriculture. This will improve agricultural productivity, including the production of fodder, and the related income, thereby moving communities away from other alternative economic activities like the sale of charcoal, which are detrimental to the local ecosystems. In Tadjourah-Ville, the high reliance on natural resources for fuel wood will be tackled by promoting sustainable access to these basic resources (through transformation of prosopis into charcoal); while alternative, climate-resilient activities, including 10 community-based fodder gardens ? will be developed. In addition, the production of fodder will be promoted on the four LDCF 2 irrigated plots, located nearby Tadjourah-Ville (to increase local availability of fodder).

Figure 3: Preferred solution in As Eyla

Figure 4: Preferred solution in Tadjourah-Ville

The preferred solution to the problem is thus a mix of green and grey infrastructure and climate-resilient activities, to restore already degraded ecosystems and enhance access to basic services, while reducing existing pressures and stresses to avoid further degradation of ecosystems. Restored ecosystems will deliver services to the population of Dikhil and Tadjourah that are key for survival and wellbeing especially under climate change.

The project will focus on two key set of solutions to break the vicious cycle in which As Eyla and Tadjourah-Ville communities are trapped:

i) Mitigating flood and drought-related risks using green and grey infrastructure to protect habitat, livelihoods and well-being

ii) Promoting climate-resilient, diversified livelihoods (including climate-smart agriculture) to reduce poverty and pressure on ecosystems

i) Mitigating flood and drought-related risks using green and grey infrastructure

Green and grey infrastructure mixes the conservation and restoration of nature with conventional approaches, like dams and dykes. It fortifies communities against climate effects including floods, while also providing other benefits such as fresh water, increased biodiversity, and soil productivity[12][12], [13][13]. Well-combined green-grey approach have greater impact than either strategy applied alone. The provision of critical services to communities through green interventions, such as soil stabilisation through reforestation, can also be accelerated through grey infrastructure, like the strengthening of riverbanks with gabion walls, with immediate benefits. Gabions complement reforestation especially in areas with soft, sandy banks and steep slopes, located on the concave banks of the wadis. The gabion walls strengthen the wadi banks and reduce their erosion[14][14]. Green

interventions are nonetheless less costly and easier to maintain than grey ones, and can enhance and increase the durability of the impacts of grey infrastructure[15][15].

Combined investments in hard infrastructure and ecosystems restoration is a cost-effective means of adapting to climate change[16][16],[17][17]. In Djibouti, the restoration of crucial ecosystems through GEF project LDCF 2 in Hanle Plain not only enhances the production of ecosystem goods and services that benefit agriculture, livestock and fisheries[18][18], but also buffer local communities against the impacts of climate change. For example, tree planting inside and along the irrigated plot of Koudi Koma, in Hanle, contributes to protecting crops against strong winds and sandstorms, which are becoming more frequent in the Hanle Plain. This intervention is complemented with grey infrastructure such as boreholes and reservoirs equipped with solar pumps that support the irrigation of agro-pastoral plots and for the tree seedling used for reforestation activities.

Green interventions that focus on the regeneration of the vegetation cover (for example along wadi banks) can restore and make use of biodiversity and ecosystem services along the degraded wadi banks like those of As Eyla and Tadjourah-Ville. This would reduce the occurrence and intensity of floods ? through soil stabilisation, reduced erosion and run-off. Moreover, in As Eyla, planting trees in the gardens located on the wadi banks would improve soil nutriment, retain moisture, and provide shade for crops. Grey infrastructure can complement reforestation on wadi banks that are severely damaged. For example, in As Eyla, it is recommended to complement reforestation with gabion walls in the most vulnerable sectors of Gobaad wadi, to reduce floods[19][19]. To ensure the availability of water for agriculture, wells and underground cisterns that capture rainfalls and run-off can be built or rehabilitated, and their construction nearby reforested areas will ensure improved groundwater recharge and reduce risks of erosion, silting and damages to the wells.

Finally, while it is noted that groundwater resources and deep-water tables are often vulnerable to salinization and over- exploitation in Djibouti, their use in As Eyla may be necessary to support agriculture away from the main wadi bed (to reduce the pressure on the riverbanks). The water tables are located deeper than those nearby the wadi bed, therefore boreholes are necessary to reach water. Prior to the construction of a new borehole, it would be necessary to conduct an in-depth hydrogeological study to determine their natural recharge capacity and ensure that they are not exceeded by extraction rates. Water use would also need to be controlled, for example by a well-trained local water management committee, and water use managed by organising a water collection fee. Finally, tree planting near the borehole would contribute to improve groundwater recharge[20][20].

ii) Promoting climate-resilient, diversified livelihoods

Ecosystem degradation in the wadis, and vulnerability to climate change are accentuated by unsustainable economic activities, including agriculture along the wadi banks, and over-extraction of natural resources for fodder and fuel wood production. Poverty, population growth and a lack of access to basic services are underlying causes driving this degradation.

In areas where the population traditionally relies on agriculture as a main economic activity, training on sustainable, climate-resilient practices for water and soil management and use, soil fertilisation and restoration, pest control, and crop protection against heat and floods, is key to revitalise the sector. The projects PROMES-GDT and PROGRES have demonstrated that a judicious combination of water-related infrastructure including hydro-agricultural investments and improved natural resource management practices (e.g. reforestation, water and soil conservation) can yield positive agricultural impacts and improvements in the living standards of the most vulnerable groups. For example, the

rehabilitation of small-scale irrigation schemes and their development through market gardening combining small-scale livestock and fruit trees have a great impact on livelihoods and nutritional status.

Irrigation equipment must be appropriated to the needs and local context. In Djibouti, the risks associated with overexploitation of groundwater are real, therefore use of surface water, which still offers great potential for mobilization and development, should be preferred (when and where possible) to support irrigated agriculture. By developing, as a priority, techniques such as check dams, wells, cisterns, etc., this potential can be fully mobilized. Modern irrigation systems combined with drip irrigation and pipeline network have been successfully tested in Djibouti. It is noted that water consumption with drip irrigation would be reduced to one third or half to that with surface irrigation. In fact, drip irrigation systems have been already applied to the modernized large-scale farms, and high quality vegetable production has been realized there. A typical example is the Damerdjog farm which was established with the support of the Government of Morocco[21][21]. However, there are some challenges in disseminating the drip irrigation including: i) drip irrigation equipment is not available in Djibouti market, so must be imported from overseas; and ii) the life span of drip tubes is supposed to be about five (5) years, so replacement cost must be considered. It can be difficult for small scale farmers and nomads to cover such expenses, therefore these challenges should be tackled in the project design. Finally, drip-irrigation may not be well-suited to all context: for example, if high wind and sandstorms are frequent like in the Hanle Plain, drip irrigation pipes easily get clogged and damaged (GEF project LDCF 2). In this case, other irrigation options, like the use of individual taps and soft pipes, should be explored.

Small irrigation pipes powered with solar pumps, combined with training on sustainable water management, will also contribute to improve agricultural production, as promoted through project Re.Pro.Va. Solar energy is promoted through this project to avoid fuel cost. The fuel cost for pump operation is extremely high and hinders the sustainability of the farm economy; moreover, fuel is only available in large cities like Dikhil and Djibouti-Ville, which adds transportation costs when used in the rural sites. An economic comparison between engine pumps (diesel and gasoline) and solar energy generations (solar pump) was made for a period of twenty years for an area of 1.5ha irrigated with one shallow well. As a result, the cost for the solar pump was 5.1 million DJF, compared to 8.4 million DJF and 11.6 million DJF, for respectively diesel and gasoline pumps. Therefore, solar pump is more economical than other pumps[22][22]. However, their maintenance by the local population can be problematic because of a lack of technical skills among beneficiaries to maintain and repair the equipment, and a difficult access to spare pieces especially in remote areas of Djibouti. It is thus critical to ensure training on maintenance and repair for key members of the community, identify most relevant equipment easy to install, use and maintain as well as to provide relevant spare pieces when possible.

To tackle climate change effects, like fertility loss, high heat and soil desiccation, or waterlogging on field, various technologies have been experienced in Djibouti. For example, soil fertility can be restored or enhanced using compost[23][23]. Compost is made using domestic, agricultural and livestock waste, as most farmers in Djibouti have small animals like goats. Animal dumps can be collected from pastoralists in exchange for fodder, for example. Individual compost boxes provide organic feed at no cost to improve soil fertility and is promoted by FAO in its projects. Shade can be provided by planting trees directly on the gardens or agro-pastoral plots, which also increase soil moisture, while culture can be elevated using earthen bridges to protect them from water logging. This was successfully implemented in Koudi Koma, in the Hanle Plain, under GEF project LDCF 2.

To ensure access to quality seeds, successful projects invest in the training and equipment of seed producers, as individual entrepreneurs, or members of a local association. These producers receive small seed nursery, equipment, and relevant training during project implementation. The seeds they

produce can then be distributed to beneficiary farmers through their cooperative. This model was successfully tested in Guirori for example[24][24] or by FAO in several agricultural programmes. Setting up small local nurseries will also support the introduction of new climate-resilient seeds or varieties supported by the project.

Climate-resilience is finally enhanced through the promotion or diversification of income sources and livelihoods. Improving income through the development of sustainable activities will also contribute to reduce pressure on the local ecosystems. Various alternative activities have been piloted in Djibouti, including small-scale poultry raising in Kalaf and Ad Bouya under GEF project LDCF 2; craft making in Raysali and Dinamli under the same projects; recycling initiatives in Tadjourah with local NGOs and associations; etc. During the field mission, women in Tadjourah and As Eyla have expressed their interest in handicrafts perceived as a promising niche that can generate substantial income as crafts can be sold during exhibitions and fairs in Tadjourah and Djibouti-Ville. However, support is needed for accessing raw material and technical training. It is key to ensure that the proposed livelihood diversification strategies or solutions i) respond to a need or demand expressed by the beneficiaries; ii) decrease pressure on local ecosystems by reducing wood extraction for energy and fodder; and iii) alleviate the reliance on highly climate-vulnerable forms of income. Providing energy access, for example, through the use of domestic wastes has been piloted in small communities (see *Section 2, GEF and non-GEF interventions*); likewise, the use of *prosopis sp.* for charcoal production is an economic and environmental-friendly approach to reduce wood extraction and control *prosopis* invasion in Djibouti[25][25]. A proof of concept has been developed by the Food and Agriculture Organisation (FAO) to inform such intervention in Djibouti. For example, in Tadjourah, it is estimated that *prosopis* covers 864 ha, while in As Eyla, they cover 440 ha. The biomass potential is 5,184 tons in Tadjourah (with potential yield of 302 tons/ year) and 2,640 tons in As Eyla (with potential yield of 154 tons/year). In its estimates of fuel wood demands in the refugee camp of Ali-Addeh and Holl Holl, FAO indicates that a one-person household would need about 20kg of fuelwood per month, up to 40 kg/month for a 4/5-people household. FAO study indicates that the production of *prosopis* biomass is a cost-effective, technically feasible fuel to support energy needs among refugee camps. It could also be conducted at the community level to address the rapid ecosystem degradation in Djibouti. Finally, promoting the local production of fodder on agro-pastoral gardens or community-managed fodder gardens (within the city) can reduce over-grazing issues in the rural and urban areas; it can also foster partnerships between farmers and herders, for example if farmers exchange their fodder for animal dumps that can used by farmers as compost. While fodder production on irrigated plots is already experienced with success through GEF project LDCF 2 in Hanle (especially Koudi Koma), community-managed fodder gardens have been promoted by RIPTA

The following Table 5 outlines how the project?s preferred solution is proposing to address the impacts of climate change on the communities targeted by the project. The technical, institutional and capacity obstacles to implementing these adaptation solutions are detailed in the barrier analysis (next section).

Table 5: Problems and solutions in Gobaad and Tadjourah

GOBAAD		
Problems	*Drivers*	*Solutions*

Reduced underground water recharge ? reduced productivity	Droughts, heat, unsustainable land management, over-extraction of natural resources	Grey and green infrastructure to enhance water recharge, capture, and access ? sustainable irrigation
Field encroachment with prosopis ? reduced productivity, loss of agricultural and grazing land	Droughts, heat	Green infrastructure ? shade provided by trees Promotion of sustainable charcoal ? prosopis converted into coal Sensibilisation on wadi protection ? protection of indigenous trees
Pests ? crop losses	Heat, floods	CRA with pest management techniques ? enhanced productivity *Women-sensitive training will be organised to ensure the full participation of women to resilient agriculture activities*

Reduced soil fertility ? reduced productivity	Floods, over-extraction of natural resources, unsustainable land management	CRA with compost box ? fertility restored, increased crop productivity CRA increasing crop productivity ? fodder available (for personal use of sale to herders) Grey and green infrastructure that reduce floods ? fertility restored *Women-sensitive training will be organised to ensure the full participation of women to resilient agriculture activities* Capacity building for planning and implementing EbA ? sustainable soil and land management

Water logging on field ? crop losses	Flood, over-extraction of natural resources	Grey and green infrastructure that reduce floods ? gardens protected against floods
Erosion of wadi banks ? loss of agricultural land, crop losses, destruction of gardens, silting of wells	Floods, over-extraction of natural resources, unsustainable land management	Grey and green infrastructure that stabilise soil ? soil stabilised, gardens and equipment protected against floods
TADJOURAH		
Problems and impacts	*Drivers*	*Solutions and impacts*

Less indigenous trees and shrubs, invasive species incl. prosopis ? Reduced fodder, flood damages to infrastructure and habitats	Drought, over-extraction of natural resources	Sustainable charcoal and fodder production ? sustainable fodder and fuel available Green infrastructure with reforestation ? indigenous trees restored Increased sensitisation on wadi ecosystems ? indigenous trees restored and protected, wadi banks stabilised CRA with a focus on fodder production ? fodder is locally available, reduced overextraction of the wood *Women-sensitive training will be organised to ensure the full participation of women to resilient agriculture activities*

Erosion of wadi banks ? Flood damages to infrastructure and habitats, less land for settlement	Inadequate protective infrastructure, uncontrolled settlement, floods	Grey and green infrastructure that stabilise soil and protect against floods ? wadi banks stabilised Capacity building for planning and implementing EbA ? climate-resilient land management

Barriers to preferred solution

There are currently three main barriers to implement the preferred solution, as detailed below.

1. Lack of finance and know-how for climate-resilient water and agricultural management

Djibouti?s agricultural sector is underdeveloped, because of a cultural prevalence of pastoralism among the population, as well as limited state investments in this sector. Even if Djibouti?s Vision 2025 put forward the expansion of agriculture as one of the government?s priority, Djibouti continues to promote its service-based economy: in 2018, Djibouti launched Africa?s biggest free-trade zone, managed by Chinese compagnies to attract further foreign investments. In fact, Dikhil?s RDP underlines the weak governmental support to the primary sector in Djibouti along with a lack of extension services from the government, as major barriers to improvements in the agricultural sector. As a result, the RDP notes a lack of training in sustainable and efficient agricultural practices and techniques, the lack of supervision of the agropastoralists, as well as limited access to adequate farming equipment and quality agricultural inputs. So far, initiatives that promote agricultural development are donor-funded while regional authorities do not have the financial, technical and human capacity for technical support[26][26]. In practice, the current lack of support and training for farmers in As Eyla is reflected in their limited water management capacity, unsustainable land management, and use of inadequate agricultural production techniques, which are not adapted to the current environment and climate changes.

Water management is one key problem negatively impacting agricultural production in As Eyla. Garden irrigation essentially comes from wells and cisterns, which capture surface water from temporary river. However, only 5% of surface water is captured, while the rest is lost through runoff (2.5%) and evaporation (92.5%)[27][27]. This is because of inadequate location of the infrastructure, as well as a lack of maintenance leading to cracks and leaks; and to erosion and silting, which reduce their storage capacity. Furthermore, most existing wells and water retention structure are not covered, exposing water to evaporation (which is increasing with climate change), sand and dust in a context where high heat, aridity and strong winds are becoming more frequent; and average precipitation amount is reduced. This affects water quantity and quality.

Irrigation methods are also not adapted to increased water scarcity in As Eyla; in fact, unsustainable water management exacerbates losses of ecosystem properties like water retention and moisture. A study from JICA (2015) indicates that earthen canals are most frequently used for irrigation[28][28]; likewise, a survey conducted by INSUCO in 2019 shows that 95% of the farmers owning an irrigated garden do not use drip-irrigation systems and heat-protection techniques to save water and retain moisture on the ground. As most farmers do not have a reservoir, water is directly collected or pumped out of the wells using gas pumps[29][29] to irrigate the field. Earthen irrigation canals are built to direct the water through the field, using natural gravity (see Figure 5). This practice results in significant water waste through seepage. Seepage losses from earthen irrigation canals vary from 30 to 50 percent of the discharge available at the head of an irrigation system[30][30] Moreover, earthen canals require continuous maintenance in order to control weed growth and to repair damage done by livestock and rodents[31][31].

As a result of poor water management in As Eyla, many farmers are only able to produce during the cold wet season, pending the rains.

Figure 5: Traditional irrigation systems in Gobaad

Agricultural practices are also not adapted to current climate-related risks, and can also contribute to reduce key ecosystem services like fertility and nutriment necessary to crops. Climate-resilient techniques to protect crops against heat or floods are not used; water staggers on the field following heavy rainfalls, which lead to crop losses; this also induces loss of topsoil and nutriment. Moreover, field visits indicate a lack of adequate use of compost to compensate soil fertility loss; some farmers just use basic manure, which can be harmful to soil and crops; most of them do not use compost as they are not aware of the benefits. A survey conducted in As Eyla in 2019 also indicates that 3% of the farmers occasionally use chemical fertilizer on their field, the rest of them being unable to control pests. Pest attacks, including from locusts, are more and more frequent as indicated during the field missions[32][32].

2. City-level land use planning do not incorporate climate change and are not well-implemented by regional authorities

The development strategy of Tadjourah and Dikhil regions is depicted in their Regional Development Plan (RDP); while specific urban planning is posed in the Urban Master Plan (SDAU). In the context of the E.U. programme ?Support to the decentralisation process and local initiatives? (Programme d?Appui a la Decentralisation et aux initiatives locales ? here called ADIL), a diagnosis of the decentralisation process and regional development plans in Djibouti was conducted. This study highlights the significant challenges for regional authorities and entities to be operational and implement the RDPs, because of a lack of financial and technical capacities. Likewise, both the RDPs and the Master Plans display costed priority interventions. However, without secured funding, the plans? implementation essentially relies on external fund from donors. As indicated in Dikhil and Tadjourah?s RDPs, and as other decentralised institutions in Djibouti, the Regional Council suffers from insufficient human resources, technical expertise, adequate equipment and financial resources. A lack of financial resources at the regional level leads to the lack of maintenance of key infrastructure, such as gabion walls, weirs, and dykes. Dykes, weirs and gabion have been established on several wadis to protect the population of Tadjourah against flood risks, and, in particular, to enable new settlements in response to the city rapid expansion. However, many of them in Tadjourah are old, often made in earth, and not maintained because of a lack of resources from the Prefecture. An overview of the main weirs, dykes and gabion wall is presented in Table 6.

Table 6: Main wadis and vulnerable neighbourhood in Tadjourah

Wadis and length	**Neighbourhoods**	**Protective infrastructure**	**Current state**	**Number of people affected**
MARSAKI ? 8km	Marsaki	Embankment dyke protected by a gabion cover	The dyke was rebuilt through GEF LDCF-2 project but suffered damages during the Nov 2019 floods; the dyke should be rehabilitated and possibly levelled.	1,500
BADOULI ? 4.25km	Badouli/Yomatara/Harak/Galasan/ Palmarai/Hareto	Embankment dyke	Dyke made in uncompacted earth, submerged and destroyed by repeated floods	6,000
TIKIBLOU ? 5km (affluent of Badouli wadi)	Badouli/Yomatara/Harak/Galasan/ Palmarai/Hareto	Embankment dyke	Dyke made in uncompacted earth, submerged and destroyed by repeated floods	6,000
GITTIROU ? 1.5km	Elamo/Cite Alwan/Palmarai/ Fia	Embankment dyke	Dyke made in uncompacted earth, degraded by multiple floods	4,000
LADINOW ? 3km	Palmarai/ Fia	Embankment dyke	Dyke made in uncompacted earth, submerged and destroyed by repeated floods	1,500
SOLALI ? 2km	Agraf	n/a	No protection	500

A review of the regional plans also indicates a lack of climate change mainstreaming in city development planning, which reduces opportunities for adaptation at the regional level especially ecosystem-based solutions. Both RDP and SDAU have a strong focus on grey infrastructure development, in order to improve water access and protection against floods, while ecosystem-based measures like reforestation, which can contribute to reducing flood and drought risks at lower costs than building boreholes, gabions and dykes, are not considered. This reflects the limited knowledge and technical capacities within the government, and especially decentralised authorities, to design and implement relevant, cost-efficient adaptation strategies; a lack of awareness of the best practices for EbA in wadis areas, and the environmental and socio-economic benefits such practices can provide, is

underpinned by the lack of existing data in Djibouti. Likewise, despite the fact that environment and management of natural resources is a decentralised responsibility, there is no environmental focal point nor climate change experts within the Regional Councils and Prefectures of Djibouti.

In Tadjourah, because of a lack of monitoring and clearly designated protected areas for settlement, new settlements tend to take place based on customary law and without formal control from the Prefecture. Although the SDAU has developed a strategy to reorganise and expand settlements in and around Tadjourah ? especially through reclaiming land with the construction of gabion walls and dykes, the rehabilitation of transport infrastructure, the de-densification of key areas, and the suppression of neighbourhoods located within wadi beds ? this strategic plans does not integrate climate change impacts. The resulting risk is that more people could settle in reclaimed areas in the future, for which the protective infrastructure is not adapted to the new risks brought by climate change. Therefore, additional people could face flood threats.

Moreover, the implementation of the SDAU and relies on external resources to be implemented. As a result, the SDAU is implemented in a piecemeal approach ? for example with the rehabilitation of the Marsaki Dyke under GEF project LDCF-2 ? and following government priorities. These priorities are also not geared toward reclaiming land for new settlement benefiting migrants, but rather towards the development of residential areas with costly houses used for tourism purpose or bought by former government staff members. Because of a lack of designated, protected areas for new dwellers, communities settle within or nearby wadis, in pauperised areas with limited to no access to basic services. They therefore directly rely on their ecosystems to provide water, fodder and wood. This contributes to land clearing, increased erosion and enhanced flood risks.

3. Lack of knowledge of best adaptation technologies in the wadis ? including EbA and climate-proof infrastructure

There is a lack of detailed studies on climate change risks and vulnerabilities at the local level in Djibouti. While temperature and precipitation trends are analysed in Ozer P. (2013), Dabar O. (2021) and the World Bank?s recent ?Climate Risk Country Profile: Djibouti ? (2021), these studies do not focus on the regional and local level. A recent analysis by ARIA Technologies (2021) partially fills this gap, though it does not focus specifically on Gobaad. Moreover, these existing studies do not provide specific information on how climate change impacts wadis ecosystems and the related goods and services that underpin livelihoods and economic activities. At the moment, there is no specific analysis of climate change-related risks and vulnerabilities (including specific location, people, key sectors and assets) that underpin the identification of climate change hotspots in Tadjourah and Dikhil. In wadi areas, there is a lack of understanding of potential flood extend and impacts[33][33]. Best practices for adaptation in the wadis are also not documented in Djibouti. Such knowledge is key to inform future policies and development plans that are resilient to climate change.

Knowledge on climate change impacts and best adaptation technologies could inform, for example, the design of flood protection infrastructure. Most of Tadjourah?s dykes have not been built with considerations of climate change, and are now partly or completely damaged because of recent intense floods. For example, the finalisation of a dyke in the Marsaki wadi in the course of 2019 contributed to protect part of the city against floods, in particular the area of Kadil? located near the West mouth of the Marsaki wadis. However, the project mid-term review (MTR) on Djibouti LDCF 2 indicated a risk that the Marsaki dyke will not sufficiently protect the city in the future due to limited integration of climate projections in the feasibility study and limited funds. In As Eyla, the construction of a dike in the Gobaad wadi, has accentuated flood risks. The dike was built following the 1988 floods, with support from the French technical cooperation and funding from the European Union. The design did not consider the risk of more frequent and intense flood and is at the origin of a modification of the flow path. This caused the disappearance of a large number of gardens[34][34]. According to the

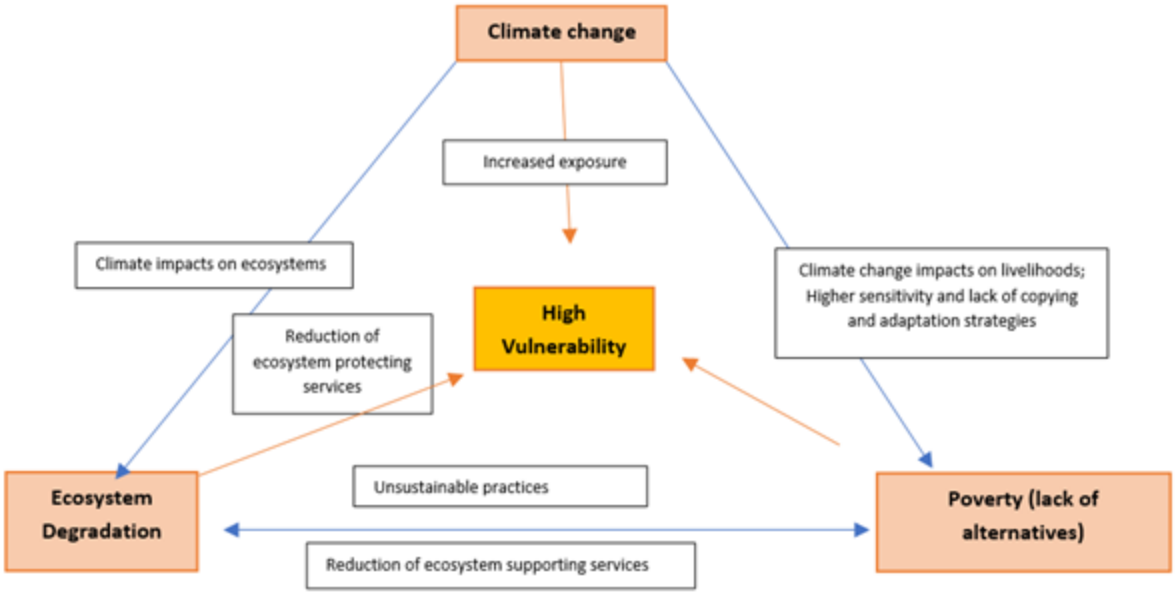
population, the modification of the wadis bed resulting from the dyke also reduced underground water recharge and water availability in the area.

Enhanced knowledge of climate change impacts on wadi ecosystems and their goods and services, which underpin rural and urban livelihoods in As Eyla and Tadjourah-Ville, is therefore critical to develop evidence-based adaptation technologies and inform land planning and the design of green and grey adaptation technologies, that significantly improve livelihoods in Djibouti?s wadis areas. Furthermore, ecosystem valuation studies can highlight the economic benefits to well-designed EbA interventions, with a potential for replication in other wadi areas of Djibouti.

2) the baseline scenario and any associated baseline projects

Under the baseline scenario and without the proposed project?s interventions, wadi ecosystems in Djibouti will continue to be degraded, increasing the vulnerability of local communities to climate change, and locking them into a vicious cycle (illustrated in Figure 6). In both Gobaad and Tadjourah sites, vulnerability of the population to climate change is increasing and this phenomenon will worsen in the future unless urgent action is taken. Climate change adds additional pressure on ecosystems contributing further to their degradation while at the same time increasing population?s reliance on their services. These same ecosystem services, which are under pressure, not only provide key services like water filtration, soil stabilisation and nutriment for agriculture, vegetation, fodder and fuel wood, but also they serve as a buffer to poor and vulnerable communities facing increasingly variable and changing climate. For example, they play a role in mitigating the impacts of floods or droughts, and supporting livelihoods (food, water and energy). In the context of climate change and socio-economic distress, the population heavily relies on their local ecosystem for providing water, fuel wood and fodder, for supporting small income-generating activities like the production and sale of charcoal, or for coping with shocks and stresses like loss of gardens and crops. This heavy reliance contributes to worsen their degradation creating a vicious cycle of vulnerability (see Figure 6). The project aims to break this cycle of vulnerability by restoring degraded ecosystems while reducing the pressures causing their destruction therefore increasing their capacity to provide key services to the rural population of As Eyla, and urban population of Tadjourah-Ville in the long-run.

Figure 6: Vicious cycle



There are several projects implemented in Djibouti that aim 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; iii) constructing infrastructure that contributes to service delivery and protection from natural disasters; iv) supporting the decentralisation process by building technical and financial capacities at regional level to implement sound and feasible local development plans; and (v) supporting the adaptation planning process in the country. Through the aforementioned interventions, those projects directly contribute to reaching the new LDCF project?s targets and achieving its impact. They can therefore be considered as project co-finance (for the non-GEF projects). In addition, these projects would in parallel significantly benefit from the new proposed interventions that contribute to i) implementing on-the-ground climate change adaptation in identified project sites including protection against more frequent and severe floods and droughts, that threatens infrastructure, livelihood activities and hard-won development gains of Tadjourah and Dikhil regions; ii) mainstreaming adaptation and EbA concerns into local planning in those two regions; and iii) creating a knowledge evidence-base to inform future adaptation strategies in Djibouti.

Co-financing initiatives

? **Projet d?appui ? la r?silience des populations rurales** ? project Re.Pro.Va.[35][35] ? FAO, funded by E.U., 2019-2025, US$ 31,360,000 (out of which US$6,272,000 considered as cofinance)

This project 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 (Minist?re de l?Agriculture, l?Elevage, la Peche et l?Eau ? MAEPE), over a five-year period; the project implementation was delayed because of the COVID-19 crisis, therefore it will likely continue until

2025. The project is being implemented in the five regions of Djibouti, namely Ali Sabieh, Arta, Dikhil, Obok and Tadjourah. It targets the agropastoral populations, with a goal to increase their resilience to drought and climate change. 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; and (v) awareness raising and training activities in agricultural production and nutrition. Training on sustainable agropastoral practices will also take place, using a ?training-of-the-trainers? approach in Farmer Field Schools (FFS) with support from FAO (see Box below).

In the region of Dikhil, this project is implemented in As Eyla, Ab Aytou and Dikhil-Ville; in the region of Tadjourah, it takes place in Randa, Ambabo and Tadjourah-Ville. In As Eyla, the project aims to train 14 beneficiaries on good agricultural practices. Training is provided in one demonstration plot set up in As Eyla by FAO, which comprises a seed nursery. This training is provided by one trainer, trained by FAO. The 1 ha demonstration plot will receive the following infrastructures in exchange for being used as a local demonstration plot: (i) a 40m3 reservoir (built), (ii) a well (currently being rehabilitated and which will be equipped with solar panels), (iii) 10 kits of 250 m2 in drip irrigation systems (being installed), (iv) PVC water supplies (main and secondary) to the plots (to be installed), (v) a 90 m2 greenhouse for the production of nursery plants (built), (vi) a 280 m2 greenhouse for the production of market garden plants (built), and (vii) an improved goat house that can house 10 females (goats) and 1-2 male / s (goat / s) (to be built).The objective is to explain sustainable agricultural techniques and demonstrate their benefits, to incite replication on the beneficiaries? own field. The project also plans to strengthen the organisation structure and technical capacity of the Gobaad cooperative.

The proposed LDCF project will benefit from Re.Pro.Va?s experiences and facilities (demonstration plots, seed nurseries, water infrastructure, etc.) to build climate-resilient livelihoods in Dikhil. In return, the proposed LDCF project will upscale/replicate Re.Pro.Va?s approach and good practices to additional gardens in As Eyla, as well as Hanle Plain and Tadjourah peri-urban area. The implementation of hard infrastructure and 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. This is particularly the case as Re-Pro.Va is not implementing ecosystem restoration. 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 adaptation 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. Finally, while the strengthening of the Gobaad cooperative under Re.Pro.Va will contribute to the success of the proposed project, the latter will complement this interventions by building business and marketing skills among the cooperative and identifying new market opportunities for agro-pastoral products.

In a nutshell:

- Under Re.Pro.Va.?s Output 1. water-related infrastructure (wells, reservoirs, etc.) and irrigation schemes will be built under in Dikhil and Tadjourah, which will improve water management and water access

- Under Re.Pro.VA.?s output 2 training will be conducted in Dikhil and Tadjourah on climate resilient agriculture and sustainable management of soil and water, which the proposed LDCF project will upscale.

- Under Re.Pro.Va.?s Output 2 nurseries for fodder, fruit and market gardening products will be built in Tadjourah and Dikhil*;* which will provide inputs to beneficiaries of the proposed LDCF project.

- Under Re.Pro.Va.?s Output 2 Gobaad cooperative will be strengthened; this will be complemented by trained on marketing techniques.

The Re.Pro.Va project is therefore considered as co-finance for the project directly contributing to reach the targets linked to ?number of gardens in As Eyla with improved water access, and protected against floods?, ?number of households with climate-resilient livelihoods? and ?number of households with access to sustainable fodder and fuel wood?

? **Programme for Water and Soil Management** (PROGRES), IFAD, extended for 2020-2024, US$ 4,151,000***[36]***[36] (out of which US$ 2,767,000 considered as cofinance)

This programme was started in 2017 with a lifespan of 7 years; it was interrupted in 2019 after running out of resources and re-launched in 2020, having secured additional funding. 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) is responsible for project implementation over its seven-year duration.

The Soil and Water Management Programme (PROGRES) aims to sustainably improve living conditions and reduce poverty among rural Djiboutian communities within the programme area. The development objective is to sustainably improve rural households? access to water and local resources, as well as their resilience to climate change. The programme's investments and activities will be implemented in two technical components, in addition to a coordination and M&E component. PROGRES responds to a request for financing from the Government of Djibouti to scale up the Programme for the Mobilization of Surface Water and Sustainable Land Management (PROMES-GDT), completed in December 2014. The programme?s raison d'?tre is therefore to scale up best practices in mobilizing surface water and managing environmental and climate change risks by:

(i) expanding and adding to the network of hydraulic structures and regeneration of plant cover

(ii) promoting exchanges and social organization around improving rural living conditions

(iii) developing innovative activities to raise pastureland productivity.

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. In Gobaad Plain, PROGRES? activities focus on improving access to surface water for domestic uses and livestock, through the rehabilitation or construction of water tanks and wells and the construction of water retention infrastructure. PROGRES has therefore built six (06) new cisterns, rehabilitate three (03) cisterns, build two (02) new water retention infrastructure and nine (09) wells. Additional infrastructure for water mobilisation are planned to be built in Grand and Petit-Barra during the upcoming period. These interventions will be complemented by sustainable fodder production, access to veterinary services and training on sustainable management of grazing land and path especially targeting the pastoral herders.

The proposed LDCF project will benefit from PROGRES?s interventions and good practices for improving rural living conditions and improving productivity in the pasture land. These lessons have been used to inform the project design (e.g. combining green and grey water infrastructure); and future lessons will inform the design of project activities focusing on fodder production and support to veterinary facilities. In addition, improved water access and grazing areas in other parts of Dikhil region under PROGRES will support the objective of the proposed LDCF project to restore and protect critical wadi ecosystems in Gobaad and reduced overgrazing pressure. In return, 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 has invested 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[37][37] 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 agro-pastoral production. These combined grey and green infrastructure, under the proposed LDCF project, will not only benefit the communities in As Eyla, but also agro-pastoral communities located downstream the Gobaad wadi, as those supported by PROGRES. 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.

Likewise, the Tadjourah region, PROGRES will build water-related infrastructure, increase access to sustainable fodder and improve land management for pasture areas and paths. All together these interventions will contribute to reduce pressures on Tadjourah?s wadis, particularly overgrazing on the wadi banks. In return, the LDCF 2 will improve land management in Tadjourah region and foster climate-resilience within local development planning, which will reduce the impacts of floods and droughts on pastoral herders transiting through Tadjourah.

PROGRES is therefore considered as project co-finance contributing to achieve the proposed project targets linked to ?number of gardens in As Eyla with improved water access?, ?number of ha reforested?, ?number of households with climate-resilient livelihoods?, ?number of households with access to sustainable fodder and fuel wood?

? Projet d?appui ? la d?centralisation, au renforcement du syst?me local de gouvernance, et ? la promotion du d?veloppement local inclusive ? ADIL[38][38], *Expertise France, funded by E.U., 2020-2024, US$ 13,500,000 (out of which US$ 5,400,000 considered as cofinance)*

This project was developed to support Djibouti?s decentralisation strategy SCAPE 1&2, and ?Djibouti Vision 2035 strategy?. It is financed by the E.U. Project ADIL is strengthening the decentralisation of Djibouti, a process that is now a government priority. At the national level, support is provided to the Ministry of Decentralisation to revise and improve the decentralisation law and territorial authority code, to ensure their harmonisation. At the regional level, ADIL will improve the technical and financial capacities of the Regional Council to implement their development plans. So far, under project ADIL, each Regional Council has recruited a General Secretary, an accountant and an engineer. These staff members were trained and will complete the elected staff currently present in the RC and headed by the President. Under project ADIL, the Regional Development Plans (PDRs) are also being updated to cover the period 2021-2025. The revision will ensure the scope of the PDRs is aligned with the financial and technical capacity available within the RC so that they can be effectively implemented. Finally, the project is aiming to improve the revenue of the regions, by revising and strengthening their tax revenue system.

The strengthening of the decentralisation of Djibouti by ADIL is supporting the proposed LDCF project, which will essentially take place at the regional and local levels. It will ensure regional authorities have stronger technical and financial capacities for local planning and on the ground implementation. This will benefit the development of local adaptation plans and successful implementation of key project interventions at project site level as proposed under the LDCF project especially on ecosystem restoration which is a key prerogative of Regional Councils in Djibouti.

This will be complemented by the proposed project, through building capacity for environment management and climate change within the Regional Councils of Dikhil and Tadjourah, and for climate change adaptation mainstreaming within local development plans (and, to some extend, in other RCs).

Moreover, the proposed LDCF project will also identify additional financial resources to support the implementation of resilient development at the regional level.

For all the aforementioned reasons the ADIL project is considered as co-finance for the proposed LDCF project contributing to achieving the targets linked to ?number of ha reforested? and ?number of local adaptation plans produced?.

? **Integrated Water and Soil Resources Management Project (PGIRES), IFAD, funded by the Adaptation Fund[39][39],** IFAD, funded by the Adaptation Fund, 2021-2027, US$5,339,285 (out of which US$2,002,000 considered as cofinance)

The overall objective of PGIRES is to improve the climate resilience of vulnerable ecosystems and increase the adaptive capacity of rural poor to respond to the impacts of climate change in Djibouti.

The specific objectives are to:

1. Strengthen the livelihoods of rural households, especially women and young people, in the face of climate change;

2. Increase the mobilization of surface water and adapt hydraulic infrastructures to climate change;

3. Empower communities for the sustainable management of hydraulic structures and other investments made according to sustainability standards;

4. Optimize the use of agricultural water while increasing the productivity of agricultural and pastoral production systems, and the nutritional status of the populations that depend on it;

5. Diversify income-generating activities and economic opportunities, in particular for women and youth affected climate change;

6. Improve basic services, particularly in the area of nutrition and health, for the rural population, in conjunction with decentralization.

The project objectives will be achieved through three components:

i) Sustainable management of climate-resilient water infrastructures (US$2,500,000): The project will build wells and cisterns to improve water access for people and animals, underground water recharge will be enhanced using grey and green infrastructure; reforestation will also target river banks to reduce erosion.

ii) Adaptation of agro-pastoral systems to climate change and enhancement of the resilience of targeted communities (US$1,590,000): Training in pasture management, soil fertility practices and efficient water uses will be supported, as well as the development of alternative economic activities especially targeting women.

iii) Capacity building and knowledge management (USD 366,000): The project will contribute to support the decentralisation process in Djibouti. It will support the strengthening of regional services of the Livestock and Agriculture Directorates. Moreover, it will generate, compile and share evidence-based knowledge for adaptation in agro-pastoral landscape of key watersheds in Djibouti.

The project will be implemented in six basins belonging respectively to the regions of Tadjourah, Ali-Sabieh, Obock, Arta and Dikhil (five regions). These areas are characterized by high poverty rates with sites where natural resources are often degraded: the majority of the selected localities are located in these pockets of poverty. Although this project does not target the As Eyla and Tadjourah-Ville areas, it will support the objective of the proposed LDCF by improving livelihoods of vulnerable communities, supporting climate-resilient land and water management, enhancing water and fodder access for pastoral herders in these regions, providing training on climate-resilient agriculture (CRA) for the

production of fodder, and promoting resilient alternative activities. It will also promote ecosystem restoration within fragile wadi areas, which will contribute to improving the climate-resilience in Djibouti?s five regions. The LDCF project will benefits from lessons learned and good practices coming out of PGIRES interventions. Moreover, PGIRES will support the decentralisation process in Djibouti, through strengthening of agricultural and livestock extension services, and will generate an evidence-based knowledge that will support the replication of good practices for climate resilient agro-pastoral management in Djibouti. In turn, PGIRES will benefit from the proposed LDCF project. In particular, the impacts of PGIRES will be upscaled to other watershed areas of Djibouti, namely the Gobaad wadi and the seven wadis of Tadjourah-Ville. Moreover, PGIRES will benefit from increased capacity for planning adaptation at the local level (including the development of local adaptation plans). Finally, PGIRES will benefit from the creation of an evidence-based knowledge on EbA and on the benefits of combined grey and green infrastructure to restore wadi ecosystem in Djibouti; in fact, PGIRES will contribute to build this knowledge base through its own interventions in five basins of the country. The project team of both projects will liaise during implementation to confirm this.

In summary, the project PGIRES is considered as co-finance to the proposed LDCF project and will contribute to achieve its various targets linked to ?number of households with climate-resilient livelihoods?, ?number of households with access to sustainable fodder and fuel wood? and ?number of ha reforested?, ?number of knowledge products developed on EbA benefits and shared to inform decision-making and policy-planning?.

? UNEP - The Global Adaptation Network (GAN ? cofinance of USD100,000)

The Global Adaptation Network (GAN) was established in 2010 to meet key climate change adaptation needs including the mobilization of existing information and knowledge, provision of targeted and packaged support and advisory services, building capacity for the uptake of knowledge as well as linking supply of expertise and knowledge to demand from practitioners and policy makers. The GAN will support the project by supporting capacity development of the project through webinars, publications and mentoring support through network activities. This Platform will also 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 and beyond especially in similar contexts.

? UN Decade on Ecosystem Restoration 2021-2030 - (*cofinance of USD300,000*)

Launched in June 2021 during Environment Day, the UN Decade on Ecosystem Restoration is a global call and framework for the protection and revival of ecosystems all around the world, for the benefit of people and nature. Led by the United Nations Environment Programme and the Food and Agriculture Organization of the United Nations, the UN Decade is building a strong, broad-based global movement to ramp up restoration and put the world on track for a sustainable future. It proposes communications, events and a dedicated web platform. The proposed project will both contribute to the UN Decade framework but also benefit from it and its different task forces including: (i) the best practices task force through good practice information and training courses, (ii) the Finance task force through the development of standards, guidance and methodologies for public and private sector investment in ecosystem restoration as well as the development of key messages and awareness raising and (iii) the framework for ecosystem monitoring including the promotion of methods and tools for restoration monitoring, trainings and south-south learning. Co-finance from the UN Decade to the proposed project is estimated to 50,000 usd per year over the 6 years of project implementation.

Other non-GEF projects

? National Adaptation Plan (NAP) Proposal ? under development, UNDP

A GCF NAP proposal under the readiness and preparatory programme is being developed by UNDP to mainstream climate change adaptation into Djibouti?s planning and budgeting processes. The current

GCF NAP draft 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 as well as inform 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.

? Conversion of *prosopis* into sustainable charcoal in Djibouti

UNHCR together with MEDD is planning an intervention to produced sustainable charcoal made out of *prosopis* collected in various regions of Djibouti. The charcoal would serve to provide fuel wood to refugee camps. A [*confidential*] concept note ?Turning the rapid spread of Prosopis species into a reliable and cleaner cooking fuel to refugee camps in Djibouti? was developed by the following partners: MEDD, FAO, UNHCR and UNITAR. The project will contribute to the transition from the inefficient firewood supply to an innovative Prosopis value chain by introducing environmentally friendly technologies and improved governance and private sector participation. The objectives are to meet the cooking energy demand of refugees in Ali-Addeh and Holl Holl settlements in Djibouti, control the spread of the invasive Prosopis species, and create income-generation co-benefits for refugees and host community.

? Other initiatives

In addition to the above-mentioned interventions, several women-oriented alternative economic activities are being supported in Tadjourah. For example, a poultry promotion project by the Ministry of Women and the Family is currently underway in Kalaf. Women use the chicken and eggs for their own consumption or sale to neighbours. RIPTA and the Women Association of Tadjourah are association with private premisses that promotes handicrafts and has received assistance from the U.S. Embassy. RIPTA, for example, includes 25 women. Crafts can be sold at local markets and fairs in Djibouti-Ville or Tadjourah-Ville and provide 20,000DJF/day (USD112) during an exhibition ? sometimes up to DJF200,000 (USD1,125) for a fair[40][40]. Likewise the Women Association of Tadjourah has worked under GEF project LDCF 2 to promote craft making in Tadjourah and Dikhil. The Women Association is committed to the Protection of the Environment. Activities of the association include collection of household waste and cleaning of the city of Tadjourah. The association has existed for about 20 years. It has 60 women members, half of whom contribute 300FD per month. Finally, the field missions noted that recently, and with the support of the Regional Council and the World Food Program (WFP), some thirty women in Tadjourah town have started gardening (creating small vegetable gardens in their homes), the harvest of which is mainly used to improve daily meals. They also have the ambition to sell the surplus of their production.

3) the proposed alternative scenario with a description of outcomes and components of the project

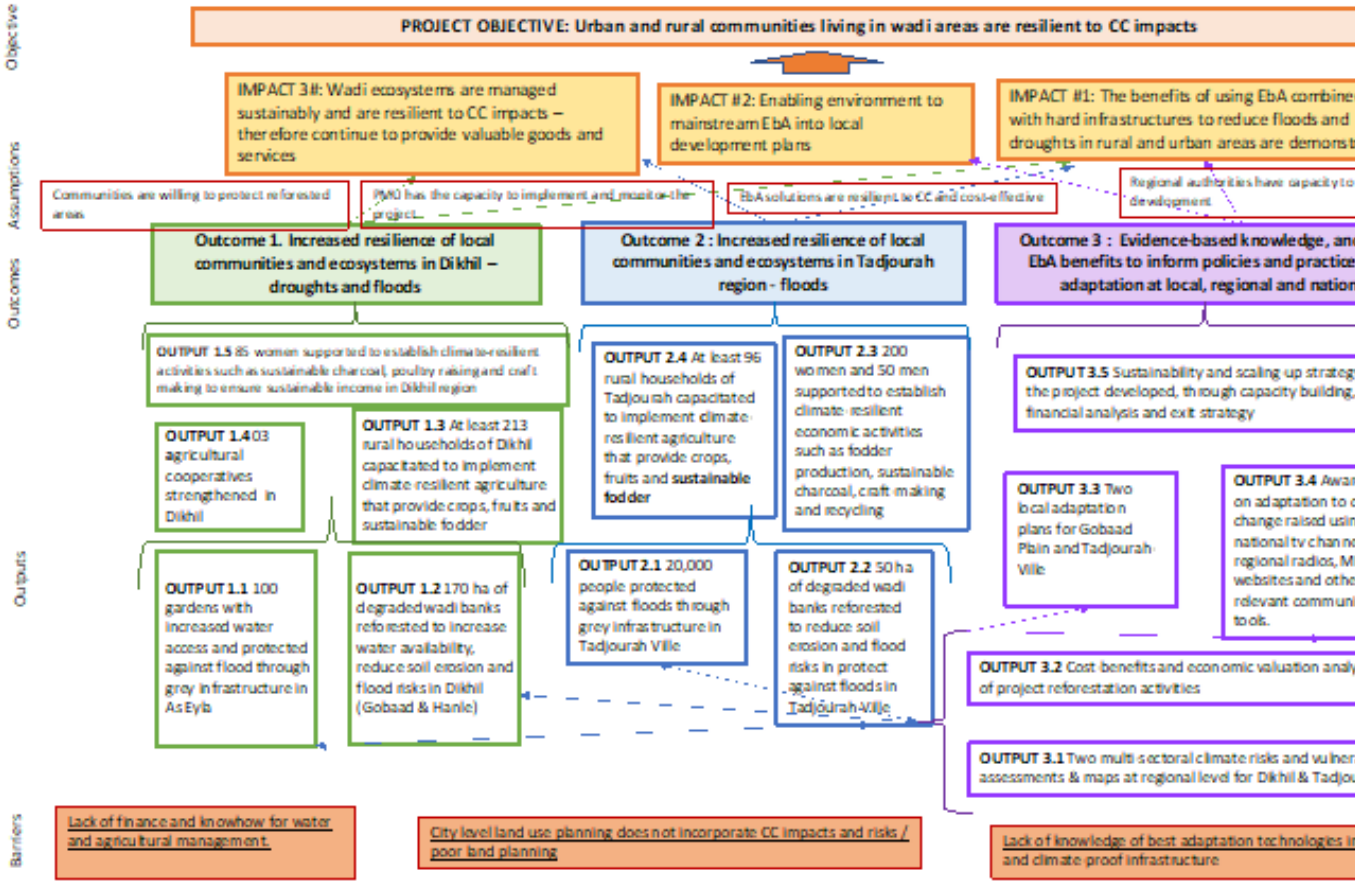
The proposed LDCF project will increase the climate change resilience of rural and urban communities of Dikhil and Tadjourah regions. This will be done through support and capacity building provided to local authorities in both regions for adaptation planning in key sectors; the concrete implementation of green and grey adaptation technologies in Tadjourah-Ville and its periphery, Hanle Plain and As Eyla;

and the generation and dissemination of new knowledge on adaptation ? in particular EbA ? to form an evidence base that can inform policy as well as future projects and development initiatives. The project?s Theory of Change is depicted in Figure 7.

Past and current project experiences have provided various lessons learned and best practices to support the design of the proposed LDCF project. These lessons, which informed the project design, management, implementation, sustainability, and gender inclusion, can be found in Section 2.4 (p.67) of the Prodoc.

The project builds, for instance, greatly on lessons learned from the project LDCF 2: *Implementing adaptation technologies in fragile ecosystems of Djibouti?s central plain*, implemented by UNEP, executed by the Ministry of Urbanism, Habitat and Environment now Ministry of Environment and Sustainable Development (MEDD) and funded by GEF, 2014-2023 with a grant of USD7,360,000. The project is implemented in the regions of Hanl? (Dikhil) 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. Lessons learned and best practices developed during implementation of on-the-ground activities of the LDCF 2 project ? such as the establishment of agropastoral plots, restoration of key ecosystems and the promotion of alternative economic activities like poultry raising ? have been compiled and have been 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 Project Document. The proposed project will ensure the continuation of climate-resilient agriculture (CRA) in Koudi Koma, Lylia Bouri, Kalaf, Ad Bouya, Sourate and Darkenle under Outputs 1.3 and 2.4.

Figure 7: Project theory of change



The project success relies on several assumptions, which are related to changes in Djibouti?s climate and socio-politic context including the level of knowledge and expertise of the project management unit members to successfully deliver their ToRs, the interest and capacity of local authorities to encourage EbA initiatives in their regions, the willingness of communities to change behaviour and actively protect their ecosystems, the cost-effectiveness of EbA interventions implemented leading to their sustainability post-project. Assumption are further detailed in the section on methodology and assumption below.

To ensure outcome change, the project will adopt a flexible approach to continuously revise the design and implementation of its interventions. Changes in climate stressors, for example more intense and frequent floods, will be incorporated in the design of all project interventions, with support from relevant international experts. Grey infrastructure will be designed to withstand increased rainfalls and flood intensity, based on worst-case climate scenarios, while agricultural activities will be planned ahead every quarter by the project?s agronomist and revised by international experts to insure their relevance in the climate change context. Likewise, while the GoD is currently supporting its decentralization process, the development and implementation of local adaptation plans highly rely on Regional Councils? technical and financial capacity. To ensure such necessary capacity, in the event that the decentralization process would be slowed down, the project invests resources in training staff members of the RCs for climate change adaptation. Moreover, a financial analysis will be conducted to identify potential public and private fund to implement the local adaptation plans. Likewise, staff members of the PMU will receive the technical support of various international experts (including a part-time CTA, international EbA and CCA experts) to ensure consistent project implementation; while

staff members will be invited to attend technical training in Nairobi. Finally, continuous community engagement, as detailed in the SEP, as well as sensitization actions, will be implemented to ensure the sustainability of reforestation activities. The main objective of the project is to increase the climate change resilience of urban and rural communities living the wadis areas of Djibouti. More precisely, the project will increase the climate resilience of the communities living in Tadjourah and Dikhil regions, that is respectively 102,329 and 104,977 people (approx. 20% of the country?s population). To achieve this, the proposed LDCF project will: i) build the capacity of local authorities to assess climate risks and vulnerability of key sectors in their region, and to plan for adaptation at the regional and local level; ii) implement green and grey adaptation technologies in As Eyla and Tadjourah-Ville, that reduced flood-related risks, increase the availability of water, and diversify income streams; iii) support climate-resilient activities that generate income and contribute to reducing pressures on the local wadis; and iv) generate an evidence-base 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.

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

Outcome 1: Increased resilience of local communities and ecosystems in Dikhil to the effects of climate change, particularly more frequent and severe droughts and floods.

The component focused on adaptation technologies in Dikhil rural communities including in As Eyla (Gobaad Plain) and in Hanle will be implemented with US$3,632,100 of grant funding from the GEF/LDCF and co-financing of US$ 6,399,500 coming from the following sources: the PROGRESS project (US$ 1,383,500), the project Appui a la resilience (Re.Pro.Va) (US$ 4,198,000) and PGIRE (USD 818,000).

The communities of As Eyla facing the recurrent impacts of floods and droughts, which lead to increasingly eroded wadi ecosystems and affecting soil erosion, siltation and reduced water recharge. This is producing agricultural losses, heavy damages to gardens and to equipment. The costs of replacement of all lost and / or damaged equipment from small agricultural equipment to motor pump, and higher investments like pipes, and wells, cannot be covered by the local farmers whose cash flow is initially modest. In addition, in Hanle, farmers are faced with increased frequency and intensity of winds, which damage young crops, fences, solar panels and tree nurseries. Droughts and warmer temperatures are impacting on endemic plant species and favouring invasive species. Crop pests and disease are becoming more problematic. Moreover, heavy rainfalls have destroyed harvests in 2018 and 2019; and water scarcity necessitates sustainable uses, which the population is not yet managing.

GEF-LDCF funding will be invested to restore and strengthen agricultural activities and livelihoods in As Eyla and Hanle, with a view to increase their climate change resilience. Adaptation technologies to be implemented on the ground will be informed by the climate change vulnerability assessment (produced under GEF project LDCF 2) for Dikhil, as well as a detailed assessment of the Gobaad wadi ? including its degradation state, water course and currents based on changes in rainfalls. These technologies will include a combination of green and grey infrastructure, agropastoral and EbA interventions. Moreover, safeguarding ecosystems and improving sustainable access to natural resources in the long run ? including water, woodfire, and fodder ? will contribute to reduce pressure on people to migrate or to adopt unsustainable survival strategies like wood extraction, which increases vulnerability to climate change.

Output 1.1 will support the construction or rehabilitation of small- to medium-scale grey infrastructure that promotes groundwater recharge and run-off capture, and that strengthens severely degraded wadi banks which are being eroded through intensive rainfall events and impacting on groundwater recharge rates. This grey infrastructure will include: i) individual wells to capture run-off and rainfalls; and ii) weir and gabion walls to strengthen wadi banks and reduce soil erosion[41][41]. The design of these grey

infrastructure will be informed by relevant studies including climate risk analysis, environmental impact assessments (EIA), and a water balance study; and 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 also be captured on a regular basis and shared on the project?s website (hosted by the Ministry of Environment, with support from GEF Project LDCF-2) to inform future similar green and grey infrastructure interventions (under Output 3.1).

To complement grey infrastructure interventions, **Output 1.2** will promote EbA. Reforestation using climate-resilient, locally-appropriate species, including climate-resilient local fodder and fruit bearing trees providing economic and nutritional co-benefits to communities will be implemented over 100 ha of degraded wadi banks, essentially within 138 gardens of As Eyla and on protected areas along the degraded wadi banks; and over 10 ha in Koudi Koma and 10 ha in Lylia Bouri, along the irrigated plots (to serve as windbreaks). In As Eyla, the owner of the most degraded gardens located in Yalahou, Sissalou, As Eyla 1 and 2, Afhaytou and Bonta, at risks from erosion and floods, will receive most of the tree seedlings for replantation. In addition, the project will work with local traditional chiefs and the Regional Council of Dikhil (RC) to set up protected reforestation areas along the wadi banks, where reforestation will also take place to reduce flood risks. Early engagement of the local chiefs and RCs, combined with community sensitisation and building knowledge of wadi ecosystems goods and services, will ensure the trees will remain protected beyond the project?s lifetime.

Reforestation activities will include indigenous species like *Acacia tortilis, Acacia asak, Acacia horrida, Cadaba rotundifolia, Balanites sp, and Salvadora persica., Laurus Nobilis*, which provides environmental and socio-economic benefits (including non-timber fibre products). The seedlings will be grown in three nurseries (located on agricultural demonstration plots, which provide water for irrigation) initially managed by nursery staff ? based on successful experience under Project LDCF-2 in Koudi Koma. The nursery staff will train 2 staff members of the RC of Dikhil, who are based in Gobaad, on how to grow and take care of the seedlings until they can be replanted. The goal is to build ownership of the tree nursery within the RC, which will take over tree production at project?s end. Reforestation will be supervised by MEDD, based on their experience from GEF project LDCF 2, and monitored as MEDD?s staff members will be trained and equipped under Output 3.2. Moreover, under Component 3, the project will train 2 staff members of Dikhil RC on environmental management, EbA and reforestation; they will also be responsible for supervising replanting in public spaces and controlling illegal logging. They will be capacitated to continue reforestation post-project, which they have agreed to do during the project?s validation workshop.

During the project, beneficiary farmers will receive trees to plant on their gardens and in newly-established protected areas, which are nearby existing gardens (to facilitate tree supervision by the farmers). Plantations will target the degraded wadi banks and water-related infrastructure, to increase soil stabilisation and water filtration, and reduce risks of erosion. Reforestation will follow EbA protocols that specify best-suited tree and shrub species; and following the lessons learned from LDCF-2. Each beneficiary farmer will be responsible for irrigating, protecting of, and caring for the tree seedlings (following training), in exchange for the support provided by the projects (rehabilitation of water infrastructure, irrigation systems, agricultural training and input). This will be formalised into a signed contract with all project beneficiaries in As Eyla. Local chiefs, RC and Gobaad Cooperative will be involved at project onset to ensure the maintenance and protection of the trees. Training will be 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. They will receive additional tree seedlings every year to ensure the strengthening of the wadi banks. The trees will not only reduce riverbanks erosion and flood risks on the gardens, but also provide fuel wood (from the dead branches, which can be collected according to custom law) that can be used for domestic needs (cooking, fodder) by individual farmers.

Output 1.3 of the proposed project will benefit from activities under Outputs 1.1 & 1.2 to revive agriculture in Djibouti?s main agricultural centre, As Eyla, and ensure its successful continuation in the Hanle Plain, which is the second main agricultural centre of Djibouti. A ?training of the trainers? and

demonstration plots approach will be used to ensure the training of agricultural technicians, who are also members of the beneficiary communities. The LDCF project will provide fences to the target gardens to prevent livestock grazing in the gardens, and equip them with cost-efficient irrigation schemes. Training modules on soils conservation, sustainable irrigations, pest control and protection of culture against climate-related hazards like floods, heat and high winds, will be provided. Beneficiary farmers will also receive small equipment and quality-seeds. These seeds, which are provided through seed nurseries that will be built on the demonstration plots, will include tomatoes, chillies, okra, watermelon, aubergine, onions and fruit trees like dates and guava; as well as fodder species including grass (*chlorisgayana, Sporobolushelvolus, Andropogon gayanus, sorghumsudanese*), legumes (*Leucaena leucocephala, Cajanuscajan, Macroptilium atropurpureum*) and local trees (*Acacia etbaica, Acacia nilotica, Acacia tortilis, Laurus Nobilis*). The production of fodder, to be used by the beneficiaries or sold to transhuman herders, will contribute to reduce over-grazing on the wadi banks, which contribute to deforestation in As Eyla. Composting units will also be built and farmers trained to produce compost using livestock, agricultural and domestic wastes, and use it in order to restore soil fertility. Beneficiary farmers will also be able to exchange the fodder they produce for animal dumps from the local or nomad herders. Pest control techniques will finally be thought as farmers have noticed more frequent pest attacks on their crops.

Agricultural training will also be provided for project beneficiaries in Hanle. This will be supported by setting up a demonstration plot with trainer in Koudi Koma and another one in Lylia Bouri. Exchange visits for the communities of Hanle to Gobaad will also be organised to showcase the benefits of CRA and sustainable wadi management. Gender-sensitive training will be organised on each project sites to ensure female farmers fully benefit from this intervention.

To increase profits from the agricultural sector, the project will strengthen the existing Gobaad, Koudi Koma and Lylia Bouri cooperatives under **Output 1.4.** The cooperatives will play a key role to provide technical support to farmers (for agricultural production), processing, storage and sale facilities. Under project Re.Pro.Va., FAO is conducting a capacity assessment of the Gobaad cooperative. Based on this, Re. Pro.Va. will develop financial, managerial and operating skills within the cooperative. The proposed LDCF project will liaise with FAO to ensure complementarity of the cooperative training, with a focus on climate change impacts, vulnerability and response strategies. The focus will be on improving financial management (to include saving schemes that can be used to finance repair of broken agricultural equipment), business and marketing capacity to boost sale of agro-pastoral products. This will be supported by a detailed market study, to be conducted under this Output, to better understand market demands and offer gaps in Djibouti and the surrounding countries. This activity will target the cooperatives of Gobaad, Lilya Bouri and Koudi Koma. Small equipment like processing, packaging and storage units, will also be provided to the cooperative (at shared cost as the cooperatives will have to contribute to the cost of equipment) to protect agriproducts against climate extremes, store and process them to increase their added value. As a result, farmers? income will increase, thereby reducing unsustainable practices like wood extraction to cover basic expense.

To further address the drivers of land degradation, alternative economic activities will be promoted in As Eyla under **Output 1.5** and based on the lessons learned from GEF project LDCF-2. Some of these activities will be designed for women, to address their specific climate change vulnerability. For example, poultry raising and handcraft making have already been successfully introduced in Hanle and Tadjourah, under the project LDCF 2; women in As Eyla have expressed their interest in developing such activities, especially craft making for which they have requested support. Establishment of small, solar-powered milk house was also successfully implemented under project LDCF-2; it is a valid option as As Eyla farmers have small goat cattle, which milk could be stored and sold using the milk-houses. Finally, initiatives to support the production of sustainable charcoal, using *prosopis* will also be promoted through the provision of adequate processing equipment and training. FAO has published a study which demonstrate the technical and economic feasibility of producing charcoal from *prosopis* in both Tadjourah in As Eyla. In particular, cutting down *prosopis* is allowed based on custom law (unlike any other tree species). This would contribute to reduce the proliferation of this invasive species, while increasing the availability of fuel wood in Gobaad and reducing pressure on key

ecosystems and native species. Please see section on GEF and non-GEF interventions for further details on these initiatives. This activity list will be complemented at project onset, based on the interests and needs of each target community.

Component 2: Resilience to floods in Tadjourah Ville.

Outcome 2 Increased resilience of local communities and ecosystems in Tadjourah region to the effects of climate change, particularly more frequent and severe floods

The component 2 focused on adaptation technologies in Tadjourah-Ville to adapt to the effects of climate change, in particular more frequent and severe floods will be implemented with grant funding of US$3,261,900 from GEF/LDCF and co-financing of US$4,275,500 coming from the following sources PROGRES (USD 1,383,500), Re.Pro.Va. (USD 2,074,000) and PGIRES (USD 818,000).

Tadjourah-Ville, which is located between the sea and 7 wadis, is increasingly affected by floods, which frequency and intensity have increased since the 1980s. The goods and services provided by the wadi ecosystems, such as the mitigation of floodwaters and groundwater recharge, are currently depleted because of the rapid degradation of the wadis due to the combined effect of climate change, uncontrolled settlement and overextraction of the natural resources by the poor urban and peri-urban communities in Tadjourah-Ville. With climate change, extreme rainfall events are more frequent, soil erosion, run-off and silting of the wadis increase, and floods are becoming a recurrent event.

Floods not only affect the communities and settlement along the wadi banks, but also spill over in entire downstream neighbourhoods leading to important losses of infrastructure, properties and even lives. The most vulnerable areas to flood in Tadjourah-Ville are the neighbourhoods of Badouli, Yomatara, Harak, Galasan, Palmarai, Hareto (6,000 people) located near the wadi of Badouli. These areas are facing recurrent floods and the related impacts on livelihoods, habitats and infrastructure.

While changes in behaviour is necessary to restore and protect wadi banks and reduce unsustainable activities, hard infrastructure are also needed given the gravity of wadis? banks erosion, and the extend of the floods currently affecting Tadjourah-Ville.

Based on Aria?s climate modelling and vulnerability assessment, produced in 2021 for GEF project LDCF-2 in Hanle and Tadjourah, and using the mapping of climate change risk (output 3.1), and detailed analysis of the wadi ecosystems (output 2.1), the specific location and design of green and grey adaptation priorities for Tadjourah-Ville, identified during the PPG phase, will be refined. Green and grey infrastructure will be strengthened or constructed in urban and peri-urban areas of Tadjourah Ville to protect communities and critical infrastructure. In **Output 2.1,** upstream and downstream areas of Badouli wadi will be targeted by grey infrastructure.

To complement grey interventions for flood mitigation in the Badouli wadi, the proposed LDCF project, through its **Output 2.2** will also implement EbA to restore ~50 ha of Acacia woodlands and oasis habitat in the upstream and peri-urban watersheds of Tadjourah Ville using climate-resilient indigenous plant species. Reforestation will be implemented on wadis of Tadjourah identified based on results coming from the wadis assessment. These targeted actions will reduce flood impacts on infrastructures, wadi ecosystems and urban and peri-urban communities. The whole population of Tadjourah-Ville, that is 20,000 people, will benefit from reduced flood risks and damages to public infrastructure and services.

This restoration will enhance the goods and services provided by these ecosystems, such as the mitigation of floodwaters and groundwater recharge. The restoration techniques and species selection will be guided by technical protocols developed by the project. To support this activity, one tree nurseries of 100 m2 will be built. Staff members of the RC, trained under the project, will also be in

charge of monitoring the plantation with support from MEDD, to ensure replanted trees are not cut down by the local population. To facilitate this, they will be equipped with a car.

During the project, tree plantation will be organised with the vulnerable communities located in the flood-prone neighbourhoods of Tadjourah. They will be responsible for protecting and caring for the trees; in exchange, they will benefit from community-based fodder gardens (see below ? **Output 2.3**). At project?s end, the tree nurseries and reforestation activities will be fully handed over to the RC, following their regional remittance in environmental management. Along with the collection of fine, a financial strategy for adaptation, developed under Component 3 of the LDCF project, will guarantee sufficient resources are available to continue annual reforestation in Tadjourah.

As wood extraction is a key driver of deforestation, the project, through its **Output 2.3**, will establish 3 community-based fodder gardens, to be managed by beneficiary community members engaged in replantation and forest protection. Moreover, the use of *Prosopis spp.* ? an invasive alien tree species which is endemic in Tadjourah ? as well as waste from households and restaurants to produce sustainable charcoal will be conducted.

The project will also tackle the lack of economic opportunity for the urban and peri-urban dwellers in Tadjourah-Ville, with a view to generate climate-resilient livelihoods that do not undermine healthy ecosystems. Small initiatives like craft making using local products will be promoted, targeting especially the women, whose vulnerability to climate change is significant. Small craft made out of local material or recycled material are currently sold in hotels in Tadjourah-Ville or during fair in Tadjourah and Djibouti-Ville. Craft making can provide 20,000DJF/day (USD112) for an association of 15-20 women to attend a craft exhibition ? sometimes up to DJF200,000 (USD1,125,000) for a fair. The promotion of alternative economic activities in the target neighbourhoods of Tadjourah-Ville, will provide a climate-resilient source of income to beneficiary women, thereby reducing the pressure on natural resources caused by unsustainable practices like the production and sale of charcoal (along with establishing woodlots).

The project will continue the support provided to the communities of the agro-pastoral plots established by the LDCF-2 in Ad Bouya (16), Darkenle (8), Kalaf (60), and Sourat (15). At the moment, GEF project LDCF 2 provides agricultural training in Kalaf, Ad Bouya and Sourate with the support of an agronomist and two local technicians. These technicians are trainers, trained by FAO under their FFS programme. A similar training approach than in Hanle and Gobaad will be promoted by this LDCF project, and exchange visits organised to successful gardens located in As Eyla. The project will establish a demonstration plot in each site of Tadjourah (four in total) and train an additional 10 trainers to provide support on each site. The project will also support the establishment of cooperatives in Tadjourah?s agro-pastoral plots, in which beneficiaries express their interest for this and when agro-pastoral production is sufficient to enable sale.

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

Outcome 3: Evidence-based knowledge, and awareness of EbA benefits to inform policies and practices and upscale adaptation at local, regional and national levels.

The component 3 focused knowledge and awareness-raising to inform EbA mainstreaming, sustainability and upscaling in the country will be implemented with grant funding of US$1,249,000 from GEF/LDCF and cofinancing of US$5,623,500 coming from the following sources: PGIRES (USD366,000), the project Appui ? la D?centralisation (ADIL) (US$4,857,500), GAN project (US$100,000) and UN Ecosystem Decade (US$300,000).

Stakeholders across Djibouti ? including the youth, government and communities ? have limited understanding of the predicted effects of climate change in both urban and rural areas and are mostly

unaware of adaptation options. The availability of evidence-based knowledge on climate risks and best-practice adaptation options ? especially EbA ? is very limited which restrict the implementation of on the ground interventions but also the mainstreaming of climate change adaptation into policies and development plans. Shortcomings are salient at the regional level. While the management of natural resources is supposed to take place at the local level, based on the decentralisation process in Djibouti, the councils often lack the technical capacity to do so. Discussions with the Ministry of Environment also indicates a lack of knowledge and expertise and resources for climate change at the decentralised level. .

Additional GEF funding is required to increase public awareness and evidence-based knowledge on interventions for climate change adaptation at the regional level in Djibouti. Through Output 3.1, the project baseline study including a capacity assessment of local organisations in Tadjourah and Dikhil will be conducted. This capacity assessment will serve to identify most-experienced associations and organisations to implement specific project activities like agriculture and craft-making. Moreover, the baseline study will serve to set out the project indicators, and the data gathering approach to monitor these. Project?s M&E will help to develop understanding of the causal linkages between project activities (measured by indicators) and reduced vulnerability to CC. The M&E process on project indicators will be led by the CTA. Moreover, climate risk maps and vulnerability assessments will highlight vulnerability hotpots, and help identify the specific adaptation technologies needed in the Gobaad Plain and Tadjourah-Ville, to inform the development of local adaptation plans for these two areas (Output 3.3). These adaptation plans will promote reforestation to ensure the continuation of this activity beyond the project. Local vulnerability assessments and adaptation plans will be informed by the detailed assessments of the wadis (activities 1.1.1 and 2.1.1) and the capacity need assessments (activities 1.4.1 and 2.4.1) conducted by the project in the regions of Tadjourah and Dikhil.

Output 3.2 will conduct an ex-ante ecosystem valuation studies to quantify and value (in monetary terms if appropriate) the environmental and socio-economic benefits of reforestation in Dikihl and Tadjourah. Collaboration with UNEP global initiative: the Economics of Ecosystems and Biodiversity (TEEB), IISD and national university will be explored to improve cost-effectiveness and build in country capacity building. Moreover, it will build capacity for understanding EbA and implementing rigorous M&E over EbA projects within the MEDD through training supported by an international M&E expert; in addition to UNEP oversight. Moreover, the project?s CTA will ensure careful monitoring, collection of lessons learned and best practices for all current and future EbA-related projects implemented in Djibouti.

The 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 by members of the Ministry of Environment. The data produced from the project will be 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 webpage for climate change adaptation established through the GEF LDCF 2 project within the website of the Ministry of Environment; and iii) at workshops to promote the mainstreaming of adaptation into national and local development processes. The information will promote the integration of climate change adaptation into decision-making and development planning in Djibouti. This knowledge management component will 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 (to start in 2022).

Under Output 3.4, regional and national awareness campaigns will be developed, based on behaviours that need to be adapted and concerned with adaptation messaging in both urban and rural areas to wider audiences than the immediate project beneficiaries, reaching out to the five Regions of Djibouti. This will include: 1 national tv campaign and 2 radio campaigns per region, using regional radio channels.

The results from studies conducted under Outputs 3.1 and 3.2, and on-the-ground interventions from Components 1&2 will be used to created targeted messages. In addition to tv and radio campaigns, the data produced from the project will be compiled and policy briefs will be produced and presented through the webpage for climate change adaptation established through the GEF LDCF 2 project within the website of the Ministry of Environment; and at workshops to promote the mainstreaming of adaptation into national and local development processes. The information will promote the integration of climate change adaptation into decision-making and development planning in Djibouti and will be fed into the NAP process in Djibouti (to start in 2022).

To further influence policies and planning processes in Djibouti, the project will organise one large-scale sensitisation workshop. Organised in Djibouti-Ville, with support from MEDD, the workshop will target 2 technical staff members of each ministry (46 people in total) plus 2 staff members of the regional councils (10 people in total). The workshop will present the project?s main success, lessons learned and best practices for adaptation in wadi ecosystems. It will also be an opportunity to showcase the results of key studies including the ecosystem valuation analysis, the multi-sectoral climate risk maps and the regional adaptation plans.

Finally, the proposed LDCF project will institutionalise the project?s outcomes on adaptation at the local level, support its financial sustainability and facilitate upscaling in other regions under Output 3.5. First, two existing staff members of Tadjourah?s and Dikhil?s Regional Councils (technicians) will be trained on environmental management and climate change. Training will be conducted by the Ministry of Environment and with support from an environmental management and climate change expert. The two trained staff members will be capacitated to ensure future interventions are aligned with the climate change and environmental priorities as delineated in the climate risk and vulnerability assessments under Output 3.1., and with the local adaptation plans developed by the project under Output 3.2.

Second, training on climate change mainstreaming into local planning will be organised for all regional authorities. The project?s Output 3.5 will organise field visits for two staff members of each reginal authority in Ali Sabieh, Obok and Arta to the project sites in Tadjourah and Dikhil. The goal is to demonstrate the impacts of ecosystem restoration combined by grey-infrastructure to reduce floods and water scarcity problems. Moreover, training will be provided to two members of each regional authority in Djibouti ? namely Dikhil, Arta, Obok, Tadjourah and Ali Sabieh ? on the methodology to assess climate risk and vulnerability levels as well as identify adaptation priorities.

Third, to secure funding for the implementation of the adaptation plans, beyond this project, a detailed financial analysis will be conducted to identify pathways to leverage public and private finance for adaptation at the regional level. This will be supported by the ecosystem valuation analysis that showcase the social, environmental and economic benefits of EbA in Djibouti. Such evidence-based can finally be used to develop bankable climate change adaptation projects for international funds (like the Green Climate Fund) to invest in Djibouti. Securing additional funding is key for post-project sustainability of key interventions including the ecosystem restoration in both sites. It is also key for the implementation of the local adaptation plans developed for the project. This financial analysis will serve as basis to develop the project?s sustainability and exit strategy under this Output. The strategy, which will be prepared from project Y 1, will include a stakeholder mapping of key institutions and organisations that will support the long-term implementation of project?s Outputs, as well as clear role and responsibilities, with costs (with potential sources of funding). The exit strategy will be prepared by the project team with support from the CTA starting at the onset of the project. The objective is to start the work at project onset, and adjust the strategy as needed until project end to ensure it is fully aligned with the needs of the government and communities to maintain the project outcomes

Table 7: Summary of expected Outputs and activities

Component 1: Resilience to droughts and floods in rural areas of Dikhil region **Outcome 1: Increased resilience of local communities and ecosystems in Dikhil to the effects of climate change, particularly more frequent and severe droughts and floods**	
Outputs	**Activities**
1.1 **At least 100 gardens with increased water access and protected against flood through grey infrastructure in As Eyla**	1.1.1 Produce a detailed assessment of the Gobaad Plain and its wadi, taking into account current degradation and climate change impacts. This will inform the specific design, size and location of the proposed infrastructures (Activity 1.1.2) and reforestation interventions (Output 1.2). The assessment will be shared through the project?s webpage (website of the MEDD) as part of the project?s wider communication strategy. 1.1.2 Based on the previous studies, conduct EIA for the gabion wall and build water infrastructures to improve water access and to strengthen wadis banks. This will include: - rehabilitate 50 individual wells using concrete to reduce risks of silting through erosion; this will focus on the most degraded wells among existing active gardens of As Eyla; - build 1km gabion and 1 weir of 300 ml to strengthen wadi banks. This intervention is recommended to complement reforestation, in the most vulnerable sectors of Gobaad wadi, to reduce floods. Gabions especially offer protection in areas with soft, sandy banks and steep slopes, located on the concave banks of the meanders at Garaytou (8 gardens) and Yalhalou (20 gardens). The gabion walls strengthen the wadi banks and reduce their erosion. This can be done without compromising the downstream riverbanks[42][42].

1.2 At least 120 ha of degraded wadi banks reforested to increase water availability, reduce soil erosion and flood risks in Dikhil (Gobaad & Hanle)	1.2.1 Based on the study conducted under Activity 1.1.1, develop wadi banks and ecosystem restorations plans including EbA protocols using climate-resilient species. 1.2.2 Set up three tree nurseries of 100m2 in As Eyla (to handover to the Regional Council of Dikhil) to grow resilient species (capacity of at least 5,000 trees) using climate-resilient, locally-appropriate species, including climate-resilient local fodder and fruit bearing trees providing economic and nutritional co-benefits to communities. The nursery, which will be designed to face climate-related risks including high winds, floods, and storms, will each be managed by an experienced nursery staff (including 1 woman). They will be located on three demonstration plots, that provide water for the seedlings. The nursery staff will train 2 staff members from the Dikhil RC to continue this activity after the project. During the projects, tree seedlings will be provided to members of the Gobaad cooperative, who will plant trees on their gardens along the degraded wadi bank, and in selected protected areas nearby gardens ? to cover ? 100 ha. Plantation in protected areas will also be supported by Dikhil?s RC. The beneficiaries will be responsible for irrigating, and taking care of the trees, in exchange of the equipment and support for CRA they receive through the project. This will be confirmed in a signed contract with the project beneficiaries and performance reports. 1.2.3 Plant trees in partnership with local communities and RC to reforest at least 100 ha of degraded wadis banks and protect agricultural gardens. Community training on replanting techniques and sensitisation on the benefits of tree planting will take place under this activity. 1.2.4 Continue reforestation activities in Koudi Koma and Lylia Bouri to cover 10 additional ha in each site. Reforestation interventions will be organised in schools of Gobaad and Hanle Plains, to sensitise young pupils to the need of planting trees to restore ecosystems? goods and services. This will be led by the nursery staff with support from the project team.

Output 1.3 At least 213 rural households of Dikhil capacitated to implement climate-resilient agriculture that provide crops, fruits and sustainable fodder	1.3.1 Conduct a need assessment and technical feasibility to inform and support the rehabilitation of the gardens with irrigation schemes and design locally appropriate training modules. This assessment will specify which gardens need rehabilitated wells, reservoirs and irrigation schemes. 1.3.2 Build irrigation systems on 50 gardens including reservoirs of 20m3 each, solar pump kits and kits of irrigation pipes and taps. The kit will include a solar pump and panels to be used on the wells. The maximum debit will be of 2m3 per hour to avoid the depletion of water resources (to be informed by the water balance study). The irrigation schemes (combined with consistent water management training under Output 1.3) will reduce water losses and promote efficient water use on the beneficiary gardens: PVC pipes will be used and placed underground, with taps located at strategic points within the gardens. 1.3.3 Set up fence for 20 gardens to protect against grazing livestock (most exposed gardens will be identified through 1.3.1) and 50 compost units to restore soil fertility. 1.3.4 Provide training on climate resilient agriculture to at least 138 households in As Eyla and 75 households in Hanle. This will include establishing six demonstration plots with nurseries in As Eyla plus one in Koudi Koma and one in Lylia Bouri and training of 10 trainers in As Eyla and 2 trainers in Hanle (out of which 4 women) to demonstrate adapted practices and their impacts. The trainers will be trained by an experienced agronomist for at least 3 months before becoming trainers; they will remain under the supervision of the main agronomist during the project, to provide continuous support and training. Farmers will learn on the plots (based on FAO model) and replicate it on their own garden with support from the trainers. Farmers in As Eyla will also receive toolkits with include water cans, spade, wheelbarrows, etc. and seeds. Under this activity, farmers will be sensitised and trained on sustainable water management. Finally exchange visits between the different communities will be organized to support exchange of good practices and learning
Output 1.4 Three agricultural cooperative strengthened to improve the sale of climate-resilient agriproducts and increase income	1.4.1 Conduct a capacity need assessment of the cooperatives in As Eyla, Lylia Bouri and Koudi Koma, a detailed market, and financial analysis, to identify best products and opportunities to access loans and micro-credits. 1.4.2. Train the three cooperatives on marketing techniques, financial management, business plans and processing and packaging for improved added value, and access to micro-finance. In As Eyla, this will complement the re-structuration of the cooperative, planned under project Re.Pro.Va. 1.4.3 Provide support to purchase relevant equipment (processing units, packaging units, storage, etc.) to the cooperatives in the region of Dikhil (Gobaad, Koudi koma and Lylia bouri).

1.5 85 women supported to establish climate-resilient activities such as sustainable charcoal, poultry raising and craft making to ensure sustainable income in Dikhil region	1.5.1 Conduct an intervention on prosopis use in As Eyla, including landscape analysis, training and equipment. This will reduce the deforestation problem, and offer a alternative source of energy, using locally-available invasive species. This will provide fuel wood to 320 households per month. It should be noted that prosopis conversation into charcoal for domestic use is new in Djibouti (as indicated in the baseline section). It is yet unclear what the impacts will be on wood extraction and local charcoal markets. Therefore, the project has budgeted for a national M&E consultant (40 days/ year) supported by an international M&E expert. Field surveys will be conducted at project?s mid- and end-term to measure changes to project?s baseline. The national M&E consultant will explore the possibility of a partnership with the University to carry out those annual surveys if needed. In addition, after 2 years of implementing this activity, an international expert will be hired to produce a detailed analysis of impacts and market potential for prosopis charcoal compared to usual wood extraction. The report will include an executive summary for decision makers with a view to inform future initiatives in Djibouti. 1.5.2 Provide equipment and training on poultry to at least 35 (5 per sector for 7 sectors) women in As Eyla. 1.5.3 Provide equipment and training on handcraft making to 50 women in As Eyla. 1.5.4 Provide 2 milk-housed and training on veterinary practices to 10 members of the Gobaad cooperative, based on the lessons learned from LDCF-2 project.
Component 2: Resilience to floods in Tadjourah Ville. Outcome 2 Increased resilience of local communities and ecosystems in Tadjourah region to the effects of climate change, particularly more frequent and severe floods	
2.1 : 20,000 people protected against floods through grey infrastructure in Tadjourah Ville	2.1.1 Produce a detailed assessment of Tadjourah and its wadi, taking into account current degradation and climate change impacts. This will inform the specific design, size and location of the proposed infrastructures (Activity 2.1.2) and reforestation interventions (Output 2.2). The assessment will be shared through the project?s web-page (website of the MEDD) as part of the project?s wider communication strategy. 2.1.2 Conduct relevant EIA and build the weirs and gabions on Badouli wadi, which includes: - 3 small embankments (weirs) of 110ml; and - 1 protective gabion dyke of 1,600ml

2.2 Output 2.2 50 ha of degraded wadi banks reforested to reduce soil erosion and flood risks in protect against floods in Tadjourah-Ville	2.2.1 Based on the study conducted under Activity 2.1.1, develop wadi banks and ecosystem restorations plans including EbA protocols using climate-resilient species 2.2.2 Set up a tree nursery of 100m2 in Tadjourah-Ville (to handover to the Regional Council of Tadjourah) to grow resilient species (capacity of at least 5,000 trees). The nursery, which will be designed to face climate-related risks including high winds, floods, and storms, will be managed by an experienced nursery staff. Water for the tree seedlings will be provided through one of the boreholes located in Tadjourah. The nursery staff will train 2 staff members from the Tadjourah RC to continue this activity after the project. During the projects, tree seedlings will be provided to people located in the vulnerable neighbourhoods of Tadjourah, namely Marsaki, Badouli, Yomatara, Harak, Galasan, Palmarai, Hareto, Elamo, Cite Alwan, Fia, and Agraf. The tree seedlings will be provided to at least 500 households located on degraded wadi banks or in close proximity, and who are willing to participate in the reforestation activities. In exchange for their involvement in the reforestation activities, the project will provide community-managed gardens for fodder production, to the benefit of the people involved in reforestation (Output 2.3). The tree beneficiaries will not only replant the trees, under the supervision of the nursery staff and the RC, but they will also be responsible for irrigating and taking care of the trees; they will also benefit from the fruits and other NTFPs provided by these trees. In addition, the RC will be responsible for the reforestation efforts in the upper wadis areas. The total planting in Tadjourah-Ville will cover 50 ha of degraded bank. 2.2.3 Implement restoration activities in partnership with local communities and the RC to reforest at least 50 ha of degraded wadis banks and provide fencing for areas affected by overgrazing. Community training on replanting techniques and sensitisation on the benefits of tree planting will take place under this activity. Finally, some of the reforestation interventions will be organised in schools of Tadjourah, to sensitise young pupils to the need of planting trees to restore ecosystems? goods and services. This will be led by the nursery staff with support from the project team.

2.3 200 women and 50 men supported to establish climate-resilient economic activities such as fodder production, sustainable charcoal, craft-making	2.3.1 Set up 3 community-managed, fenced, gardens for fodder production. These gardens will be managed by the community members involved in the replantation activities (Output 2.2). Their access to the fodder will be linked to their performance in replanting trees. A storage room will also be built to ensure drying of the grass before use. The fodder gardens will not only provide fodder for the beneficiary community members, but also a source of income as extra fodder can be sold to other community members. It will contribute to reduce overgrazing on the wadi banks. The fodder gardens will be built near existing water points ? either boreholes, well, or weir set up in the wadis ? and equipped with a solar pump and irrigation pipes. The beneficiary communities will receive relevant equipment and training to continue the production beyond the project. 2.3.2 Conduct an intervention on prosopis use for charcoal in Tadjourah-Ville. This will reduce the deforestation problem, and offer an alternative cheap source of cooking energy, using locally-available prosopis. 2.3.3 Provide support for a micro-project on craft-making, building upon the LDCF-2 success, for at least 150 women, working with the Tadjourah Women Association (or another local association based on the capacity assessment).
2.4 At least 96 rural households of Tadjourah capacitated to implement climate-resilient agriculture that provide crops, fruits and sustainable fodder	2.4.1 Conduct capacity need assessment to inform the training modules. 2.4.2 Train communities of Ad Bouya, Darkenle, Kalaf, and Sourat in Tadjourah region using demonstration plots with 10 additional trainers + the 2 trainers from LDCF 2 project (with 4 women), to expand climate resilient livelihoods. This activity will include one exchange visit for 20 farmers to gardens in Gobaad. 2.4.3 Set up robust cooperatives for interested communities and facilitate access to equipment
Component 3: Capacity-building, knowledge and awareness-raising. **Outcome 3: Evidence-based knowledge, and awareness of EbA benefits to inform policies and practices and upscale adaptation at local, regional and national levels.**	

3.1 Two multi-sectoral climate change risk and vulnerability assessments and risk maps produced in Dikhil and Tadjourah regions.	3.1.1 Conduct baseline study including capacity assessment of local organisations, and compiling data on livelihoods, socio-economic status, climate change vulnerability and environmental degradation in As Eyla and Tadjourah-Ville. This will be used to monitor the project?s impacts and progress towards targets. 3.1.2. Based on the climate report of ARIA Technologies (2021) and consultations with the local communities and authorities of both areas, produce multi-sectoral climate risks and vulnerability assessments & maps at regional level, for Dikhil and Tadjourah. The maps will inform the development of regional adaptation plans (Output 3.3.) 3.1.3 Organise workshop in Dikhil and Tadjourah regions to present and validate the risk and vulnerability assessment and maps.
3.2 Cost-benefits and economic valuation analysis of project reforestation activities	3.2.1 Conduct an ecosystem valuation study on ecosystem services provision and develop a scenario for reforestation and land management interventions in the project sites; assess the changes in ecosystem services that would arise from the interventions, and value these changes. The study will inform the development of EbA protocols to guide reforestation interventions. 3.2.2 Train 20 identified staff members of MEDD on M&E approaches for EbA projects and interventions. GIS technologies and sensitise them on ecosystem valuation techniques (15-days for 20 staff members including 10 women and provide relevant equipment like drone, computer, software, etc.). 3.2.3 Collect project lessons learned and develop knowledge products to be shared on the Ministry?s website and through the awareness raising campaigns.
3.3 Two local adaptation plan developed for the Gobaad Plain and Tadjourah-Ville in a participatory way	3.3.1 Using a participatory approach, develop adaptation plans for the regions of Dikhil and Tadjourah. The adaptation plans will be carefully aligned with the RDPs (currently under revision) and SDAUs to ensure that they contribute to the decentralisation process in Djibouti, can be implemented by the regional authorities (based on their technical capacities and resources), and can be (at least partly) supported through regional budget. Additional financial resources for their implementation will further be sought under Output 3.5. 3.3.2 Present the plans to local communities and authorities during a workshop to validate them.

3.4 Awareness on adaptation to climate change raised using national tv channels, regional radios, MEDD websites and other relevant communication tools.	3.4.1 Develop awareness raising strategy based on behaviours that need to be adapted and conduct awareness campaigns for target groups school pupils; youth; women?s groups; NGOs; donors; local authorities; local leader and mosques, using relevant channels including 1 national tv campaign, 2 radio campaigns per region, MEDD website and other relevant communication systems like pamphlet and flyers, documentaries to showcase the impacts of the project, etc.. Awareness of the project will take place beyond Djibouti, through the attendance of one staff member of MEDD to two interventional events. 3.4.2 Organise a national sensitisation workshop for policy-makers 3.4.3 Provide support to organise the annual Environmental Day. 3.4.4 Support the NAP process.
3.5 Sustainability and scaling-up approach for the project established, through capacity building, financial analysis and exit strategy	3.5.1 Train at least two staff members of Dikhil and Tadjourah?s RCs on environmental management and climate change (2x5 days training session in Djibouti, at MEDD office, plus refresh of 1x5 days every year). 3.5.2. Conduct detailed financial analysis and prepare recommendations to increase climate change finance in Djibouti from public and private sources.3.5.3. Organise field visits and training sessions (1 x 5-days) on mainstreaming adaptation into local planning for 2 representatives of each RC. 3.5.4 Develop the project?s sustainability and exit strategy, including responsibility parties, budget and source of funding to implement it.

Training plan

COMPONENT/ACTIVITY	IMPACT
As Eyla: community members	
Component 1, Activity 1.3.4	138 community members in Gobaad trained on climate resilient agriculture incl. 26 women
Component 1, Activity 1.3.4	10 local agricultural trainers trained, incl. 3 women
Component 1, Activity 1.5.2	35 women trained on poultry raising
Component 1, Activity 1.5.3	50 women trained on handcraft

Component 1, Activity 1.5.1	25 men and 25 women trained on sustainable charcoal
Component 1, Activity 1.4.2	10 members of cooperative trained on business techniques incl. 5 women
Hanle: community members	
Component 1, Activity 1.3.4	2 local agricultural trainers trained incl. 1 woman
Component 1, Activity 1.3.4	75 community members trained on CRA incl. 33 women
Component 1, Activity 1.4.2	10 members of cooperative trained on business techniques incl. 5 women
Tadjourah: community members	
Component 2, Activity 2.4.2	12 local agricultural trainers trained incl. 4 women
Component 2, Activity 2.4.2	96 community members trained on CRA incl. 35 women
Component 2, Activity 2.3.1	100 people trained on fodder production incl. 50 women
Component 2, Activity 2.3.3	150 women trained on craft making
Component 2, Activity 2.3.2	50 women and 50 men trained on sustainable coal
Regional: Government staff	
Component 3, Activity 3.5.1	2 staff members per RC (total of 10 people incl. 5 women) trained on environmental management and CC mainstreaming in local plan
National	
Component 3, Activity 3.2.2	20 staff members of MEDD at national level trained on M&E, incl. 10 women

Women?s engagement

1. The project has been carefully designed to promote gender-sensitive activities, which will contribute to empower women and support gender equality in Djibouti. Women in both project sites have been consulted by a gender expert in women-only focus groups in order to express their concerns and needs (see Gender Assessment, Appendix 13 of project document). In both Dikhil and Tadjourah,

women are already engaged in agricultural activities. For example, there are 26 women-managed gardens in As Eyla; while in GEF LDCF 2 project?s site of Lylia Bouri, women are already producing and selling fodder. As it was demonstrated that women are extremely vulnerable to climate change impacts, the project will ensure they fully benefit from all its interventions, and that their climate change resilience is enhanced. This will be done by:

2. - including women in reforestation activities with at least one female nursery staff in Gobaad, and at least 50% of the participant to reforestation in Tadjourah being women;

3. - ensuring at least 3 agricultural technicians in Gobaad are women; 1 in Hanle; and 4 in Tadjourah;

4. - providing gender-sensitive agricultural training (led by women technicians) promoting crops, fodder, fruits and vegetables that interest women and organizing trainings at suitable time;

5. - ensuring at least 50% female beneficiaries of the community-managed fodder gardens in Tadjourah and in prosopis conversion activities;

6. - developing additional economic activities as requested by women (poultry, craft-making);

7. - training of 1 woman per RC on environmental management and climate change (in Dikhil and Tadjourah) and on adaptation planning at local level (for all RCs); and

8. - training of 10 women staff members of MEDD on EbA, M&E and GIS technologies.

4) alignment with GEF focal area and/or impact program strategies

The proposed project is aligned with the following GEF Focal Areas:

- CCA-1: Reduce the vulnerability and increase resilience through innovation and technology transfer for climate change adaptation

Outcome 1.1 Technologies and innovative solutions piloted or deployed to reduce climate related risks and/or enhance resilience.

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

Outcome 3.1 Climate resilient planning enabled by stronger climate information decision-support services and other relevant analysis.

The project will reduce climate change vulnerability in Dikhil and Tadjourah by combining green and grey technologies for adaptation to climate change. This is an innovative approach that will be implemented in the rural Gobaad and Hanle Plains and peri-urban areas of Tadjourah Ville under the proposed LDCF project. Such a combination will be used to promote: i) water conservation and groundwater recharge; ii) the mitigation of floodwaters; and iii) climate-resilient livelihoods. A growing body of research[43][43] has proven that an EbA approach combining grey and green infrastructure is an innovative and cost-effective means of adapting to climate change, particularly when reforestation and land rehabilitation is used to complement or improve small-scale grey

infrastructure[44][44]. The use of EbA in combination with small-scale grey infrastructure is expected to reduce the frequency and severity of droughts and floods in Gobaad Plain, and floods in Tadjourah Ville caused by changes in rainfall patterns. 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, well-being, and socio-economic development in Djibouti.

The proposed LDCF project also fosters enabling conditions to implement adaptation at the local level, thereby supporting the decentralization process in Djibouti. This is done by supporting local adaptation planning (through capacity building and access to finance). Climate risk maps and vulnerability assessments will serve to guide future climate-resilient development in the project?s areas; to ensure this, local adaptation plans will be developed for Dikhil and Tadjourah, and funding identified to ensure their implementation. These plans will be aligned with the revised RDPs, with a view to ensure climate-resilient development and land management in these two regions. To ensure these plans can be implemented beyond the project?s lifetime, a details financial assessment of pathways to leverage climate finance will be produced and recommendations made. Such climate finance is at the moment not available in Djibouti, and not sought after even in project supporting the decentralisation process, like ADIL project. Finally, it is important to note that the project will generate significant new knowledge on the economic benefits of combined green and grey infrastructure to restore wadi ecosystems in Djibouti; such knowledge is currently unavailable. Ecosystem valuation analysis will provide scientific evidence to leverage future investments in EbA in Djibouti, from public and private sources. Such sources will be studied and identified through a detailed financial analysis, to be conducted under Component 3 of the project. Overall, Component 3 of the proposed project 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, and possible other countries[45][45].

5) incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing

For **Component 1**, in addition to the LDCF US$3,632,100, the project co-financing plan includes US$6,399,500. This comes from PROGRES (USD 1,383,500), Re.Pro.Va. (USD 4,198,000) and PGIRES (USD 818,000)

PROGRES - Programme for Water and Soil Management ? funded by IFAD and implemented with the Ministry of Agriculture, has implemented interventions that improve access to surface water for agropastoral activities in As Eyla, which will support the EbA approach of the LDCF project to restore and protect natural ecosystems, and to improve groundwater recharge. More precisely, PROGRESS has built six (06) new cisterns, rehabilitate three (03) cisterns, build two (02) new water retention infrastructure and nine (09) wells. Additional interventions for sustainable pasture management in Dikhil will also be implemented. This support the proposed project by increasing access to key resources like water and fodder, promoting sustainable land management and restoring local ecosystems.

Likewise, project Re.Pro.Va (funded by the E.U. and implemented by FAO) aiming at increasing the resilience to droughts for agropastoral communities in five regions including Dikhil (Gobaad), has built

one farming demonstration plots in As Eyla, which will be equipped with hydraulic infrastructure. The plot will also include a seed nursery and be used for the promotion of climate-resilient agricultural practices. The proposed LDCF project will upscale FAO?s good practices in Gobaad, using the ?training of the trainers? and demonstration plots approach of the Re.Pro.Va project. PGIRES, which will be implemented by IFAD in 2021, will also support the proposed LDCF project. PGIRES promotes improved water access, CRA, the restoration of degraded basins, and support to resilient economic activities. This project would benefit from enhanced capacity for adaptation planning at the local level, as well as increased knowledge on EbA practices. Finally, the implementation of climate change adaptation interventions will support Dikhil?s RDP and, more broadly, Djibouti Vision 2035, which aim to improve the livelihoods and socio-economic development. With improved and alternative livelihood options, communities will remain in As Eyla, cultivating their plots and protecting their local ecosystems.

For **Component 2**, in addition to the LDCF US$3,261,900 the project co-financing plan includes US$4,275,500 from the following projects and programmes: PROGRES (USD 1,383,500), Re.Pro.Va. (USD 2,074,000) and PGIRES (USD 818,000)

Project Re.Pro.Va. will has built one farming demonstration plot in Tadjourah, which will be equipped with hydraulic infrastructure. The plot will also include a seed nursery and be used for the promotion of climate-resilient agricultural practices. The proposed LDCF project will upscale FAO?s good practices in Tadjourah (on project GEF-LDCF-2 sites), using the ?training of the trainers? and demonstration plots approach of the Re.Pro.Va project. In addition, Re.Pro.Va promotes increased access to sustainable fodder, a goal this is also targeted by Component 2 ? through fodder production in community-managed plot and individual fields.

PROGRES and PGIRES, which are implemented by IFAD, promote improved access to resilient water and pasture, CRA for fodder production, the restoration of degraded basins, and support to resilient economic activities. In addition, PGIRES will strengthen the decentralisation process in Djibouti by strengthening agricultural and livestock extension services. These projects will contribute to reduce pressures on critical wadi ecosystems, including those located in Tadjourah Ville, as access to water and fodder will be facilitated across Tadjourah region; moreover, they promote access to alternative economic activities especially for women, thereby reducing their climate change vulnerability and reliance on ecosystems. Finally, initiatives from local NGOs and associations in Tadjourah ? like the Women?s Association of Tadjourah ? provide alternative source of income to the vulnerable population of Tadjourah. This ensures that reforestation efforts undertaken by the project LDCF project will be maintained, and that the hard-won development gains in the region is continued.

For **Component 3**, in addition to the LDCF US$1,249,000, the project co-financing plan of US$5,623,500 for this component comprises baseline investments that all have a knowledge management and awareness raising component: PGIRES (USD366,000), the project Appui ? la D?centralisation (ADIL) (US$4,857,500), as well as in-kind co-financing from GAN project (US$100,000) and UN Ecosystem Decade (US$300,000).

Project ADIL is being implemented from 2020 to 2024 to strengthen the decentralisation of Djibouti, a process that is a government priority. At the national level, support is provided to the Ministry of Decentralisation to revise and improve the decentralisation law and territorial authority code, to ensure their harmonisation. At the regional level, each Regional Council has recruited a General Secretary, an accountant and an engineer. These staff members will complete the elected staff currently present in the RC and headed by the President. Under project ADIL, the Regional Development Plans (PDRs) are being updated to cover the period 2021-2025. The revision will ensure the scope of the PDRs is aligned with the financial and technical capacity available within the RC. Finally, the project is aiming to

improve the revenue of the regions, by revising and strengthening tax revenue. Likewise, project PGIRES will increase the capacity of local services from MAEP to support and advise local population, thereby enhancing the decentralisation process in Djibouti.

Project ADIL and PGIRES support the proposed LDCF project by building capacity and strengthening the local development process in Djibouti. These projects will be complemented through the capacity building interventions for environmental management and climate change adaptation at the local level (in all regions of Djibouti), planned under this LDCF project. Moreover, the RDPs will be supplemented by local climate change adaptation plans designed for Dikhil and Tadjourah. These plans will ensure the success of the regional development plans, through mainstreaming green and grey adaptation technologies that address the climate risks identified under the risk assessment. Capacity for adaptation planning at the local level, will be built to support Djibouti?s decentralization process, which currently entrusts environmental management responsibilities to under-capacitated regional institutions. These institutions will receive more technical and financial capacity through project ADIL, which will thus be strengthened with the adaptation recommendations, produced based on scientific evidence by the proposed project. Finally, the proposed LDCF project will complement ADIL?s efforts to strengthen financial resources at the regional level by conducting a detailed market analysis and identifying pathways for leveraging public and private adaptation finance in Djibouti.

The NAP (under Outcome 3.1) will contribute to enhance adaptation planning at national level, through improved coordination between line ministries and relevant institutions therefore complementing the proposed LDCF 4 project which will promote adaptation planning at the regional level. Moreover, the NAP, under its Outcome 3.2 will build knowledge to inform adaptation measures and set-up M&E indicators to monitor adaptation progress in Djibouti. This will complement the proposed project?s knowledge products aiming at information the design of efficient adaptation solutions as well as trainings of MEDD staff on Ecosystem-based Adaptation M&E. Finally, NAP?s Outcome 3 will increase financial reporting for adaptation using a tracking system, which will also capture interventions done under the proposed LDCF 4 project.

Summary of contributions from co-financing initiatives

Component 1 co-financing: 6,399,500	**Co-financing expected outputs, associated timeframe and benefits /contributions to the LDCF-4**	**LDCF-4 project?s related outputs and complementarity with co-financing**

Project Re.Pro.Va.: US$ 4,198,000	- build 1 demonstration plot equipped with a well and reservoir, and irrigation systems in As Eyla to demonstrate the impacts of CRA (for fruits, crops and fodder production), sustainable water and land management (*by 2023*) - build several nurseries for fodder, fruit and market gardening products to increase access to quality agricultural inputs (*by 2024*) - implement training for farmers to develop capacity to implement CRA (*by end of 2024*) - strengthen the Gobaad cooperative to streamline its organisations and reinforced technical capacity for cooperative management to make it more efficient (*by 2025*) <u>Overall, Re.Pro.Va will contribute and/or upscale the following expected targets of project LDCF-4:</u> - number of gardens in As Eyla with improved water access, and protected against floods - number of households with climate-resilient livelihoods - number of households with access to sustainable fodder and fuel wood	- Output 1.1 & 1.2 will increase water access, complementing Re.Pro.Va - Output 1.1 & 1.2 will enhance protection against floods to protect fields and increase agricultural productivity in As Eyla (including benefiting Re.Pro.Va?s farmers) - Output 1.3 will be informed by the CRA training modules implemented under Re.Pro.Va. to scale up resilient agricultural practices - Output 1.3 will scale up the number of farmers implementing CRA in Gobaad, as well as access to quality-seeds and fodder. It will also build on Re.Pro.Va?s best practices for establishing and managing nurseries - Output 1.4 will build on and complement training of the Gobaad cooperative ? training modules will be developed based on a capacity need assessment to be conducted following the support Re.Pro.Va will provide.

PROGRES: US$ 1,383,500	- increase access to surface water for domestic uses, agriculture and livestock production (*by 2023*) - promote sustainable fodder access (*by 2023)* - restore land and train on sustainable grazing practices (*by 2023*) - improve access to veterinary services (*by 2023*) <u>Overall, PROGRES will contribute and/or upscale the following expected targets of project LDCF-4</u>: - number of gardens with improved water access - number of ha reforested - number of households with climate-resilient livelihoods - number of households with access to sustainable fodder and fuel wood	- Output 1.1 & 1.2 will restore degraded wadis banks, thereby protecting grazing lands and livestock from the impacts of floods and land erosion which will complement PROGRES interventions - Outputs 1.1 & 1.2 will improve water access for agricultural activities complementing PROGRES similar interventions - Output 1.3 will promote sustainable climate-resilient agricultural production, supporting access to sustainable fodder complementing PROGRES interventions - Output 1.5 will provide training and equipment for veterinary practice, complementing PROGRES

PGIRES: USD 818,000	- enhance water access through construction of grey and green water-related infrastructure (*by 2024*) - manage water and agro-pastoral land in a sustainable way, leading to enhanced agricultural productivity (crops, vegetable, fodder) (*by 2026*) - promote new economic activities for women (*by 2026*) Overall, PGIRES will contribute and/or upscale the following expected targets of project LDCF-4: - number of households with climate-resilient livelihoods - number of households with access to sustainable fodder and fuel wood - number of ha reforested	- Output 1.1 & 1.2 will increase water access, using green and grey infrastructure and complementing PGIRES (up-scaling beneficiaries) - Output 1.1 & 1.2 will enhance protection against floods to protect fields and increase agricultural productivity in As Eyla ? benefiting PGIRES project beneficiaries - Output 1.3 will promote CRA including sustainable water and land management practices to complement and scale up PGIRES - Output 1.5 will promote new economic activities for 85 women, complementing PGIREs interventions
Component 2 co-financing: 4,275,500	**Co-financing expected outputs, associated timeframe and benefits/contribution to the LDCF-4**	**LDCF-4 project?s related outputs and complementarity with co-financing**

Project Re.Pro.Va.: USD 2,074,000	- build 1 demonstration plot equipped with a well and reservoir, and irrigation systems in Tadjourah region, to demonstrate the impacts of CRA (for fruits, crops and fodder production), sustainable water and land management (*by 2023*) - build several nurseries for fodder, fruit and market gardening products to increase access to quality agricultural inputs (*by 2024*) - implement training for farmers to develop capacity to implement CRA (*by end of 2024*) - strengthen the Gobaad cooperative to streamline its organisations and reinforced technical capacity for cooperative management to make it more efficient (*by 2025*) Overall, Re.Pro.Va will contribute and/or upscale the following expected targets of project LDCF-4: - number of households with climate-resilient livelihoods - number of households with access to sustainable fodder and fuel wood	- Output 2.3 & 2.4 will scale up the number of farmers with access to sustainable fodder (through production in community-managed plots or in agricultural fields) - Output 2.4 will be informed by the demonstration plot approach, and CRA training modules implemented under Re.Pro.Va. to scale up resilient agricultural practices - Output 2.4 will scale up the number of farmers implementing CRA in Tadjourah, as well as access to quality-seeds and fodder. It will also build on Re.Pro.Va?s best practices for establishing and managing nurseries - Output 2.4 implementation will be informed by the approach and best practice for cooperative establishment and training, developed under Re.Pro.Va

PROGRES: USD 1,383,500	- promote sustainable fodder access (*by 2023)* - restore land and train on sustainable grazing practices (*by 2023*) <u>Overall, PROGRES will contribute and/or upscale the following expected targets of project LDCF-4:</u> - number of ha reforested - number of households with access to sustainable fodder and fuel wood	- Output 2.1 & 2.2 will restore degraded wadis banks, thereby protecting grazing lands and livestock from the impacts of floods and land erosion; and enhancing sustainable access to water (complementing and supporting PROGRES related objectives) - Output 2.3 & 2.4 will scale up the number of farmers with access to sustainable fodder (through production in community-managed plots or in agricultural fields)
PGIRES: USD 818,000	- enhance water access through construction of grey and green water-related infrastructure (*by 2024*) - manage water and agro-pastoral land in a sustainable way, leading to enhanced agricultural productivity (crops, vegetable, fodder) (*by 2026*) - promote new economic activities for women (*by 2026*) <u>Overall, PGIRES will contribute and/or upscale the following expected targets of project LDCF-4:</u> - number of households with climate-resilient livelihoods - number of households with access to sustainable fodder and fuel wood - number of ha reforested	- Output 2.1 & 2.2 will increase water access, using green and grey infrastructure complementing PGIRES?s interventions - Output 2.4 will promote CRA including sustainable water and land management practices to complement and scale up PGIRES ? including through the production and sale of sustainable fodder - Output 2.3 will promote new economic activities for 200 women, complementing PGIREs interventions - Output 2.3 will scale up the number of farmers with access to sustainable fodder (through production in community-managed plots)

Component 3 co-financing 5,623,500	**Co-financing expected outputs, associated timeframe and benefits/contributions to the LDCF-4**	**LDCF-4 project?s related outputs and complementarity with co-financing**
Project ADIL: US$4,857,500	The project supports the strengthening of the decentralisation of Djibouti. - update of local management tools (the RDPs) (*by 2022*) - increase capacity of local authorities for local planning, including implementation of RDPs (*by 2024*). Overall, ADIL will contribute and/or upscale the following expected targets of project LDCF-4: - 2 local adaptation plans produced for the regions of Dikhil and Tadjourah - 2 staff members of Dikhil RC and 2 staff members of Tadjourah RC trained on environmental management and climate change - At least 2 staff member of each RC of Djibouti trained on mainstreaming adaptation into local planning	- Output 3.3 will complement the updated RDPs with local adaptation plans that includes measures to ?climate-proof? the RDPs and local development - Outputs 3.2, 3.3 & 3.5 will train local authorities on environmental management, climate change, adaptation, and mainstreaming into local planning ? to complement ADIL in strengthening the capacity of local authorities - Output 3.5 will identify additional financial resources to implement revised RDPs, in particular the related climate adaptation measures developed under Output 3.3.

PGIRES: USD366,000	- create new knowledge for adaptation in agro-pastoral landscape of key watersheds in Djibouti (*by 2027*) <u>Overall, PGIRES will contribute and/or scale up the following LDCF-4 targets:</u> - number of knowledge products developed on EbA benefits and shared to inform decision-making and policy-planning	- Output 3.1 and 3.2 will contribute to knowledge production (for climate-resilient wadi management in Djibouti) that will complement PGIRES - Output 3.4 will support PGIRES by facilitating the dissemination of best adaptation practices and sensitising local communities and stakeholders on adaptation
GAN: US$100,000	- generate and disseminate knowledge on adaptation for practitioners and policy-makers - offer access to training materials and other resources to the project team and offer a conduit for publishing the results of the LDCF project <u>Overall, GAN will contribute to the following LDCF-4 targets:</u> - Fact sheet and lessons learned for ecosystem restoration produced and shared - 56 government staff members with increased knowledge through training (scale to be determined in the baseline study).	- Outputs 3.2, 3.3 and 3.5 supporting capacity development of key stakeholders in Djibouti will be supported by, and build on GAN?s interventions and experience for capacity building - Output 3.4 to raise awareness of CCA and disseminate knowledge products will be suported by GAN?s platform for sharing lessons learnt and best practices - Output 3.1 & 3.2 will generate new knowledge on adaptation practices in wadi ecosystems that can be shared through GAN?s networks

UN Decade: US$300,000	- provide training courses to relevant stakeholders in Djibouti on land restoration - guide investments in ecosystem restoration - raise awareness of the significance of restoring degraded ecosystems - disseminate good practices, methods and tools for improved ecosystems restoration <u>Overall, GAN will contribute to the following LDCF-4 targets:</u> - 170 ha of wadi reforested - Fact sheet and lessons learned for ecosystem restoration produced and shared - 56 government staff members with increased knowledge through training (scale to be determined in the baseline study).	- Output 3.1 & 3.2 will generate new knowledge on adaptation practices in wadi ecosystems. This will inform ecosystem restoration investments, promoted under the UN Decade - Output 3.4 will complement, scale up, and be informed by UN Decades? interventions for awareness raising
Project Management Costs 814,000	**Co-financing benefits/contributions to the LDCF-4**	
Dikhil RC: USD 84,500	Dikhil RC will provide a fully furnished office for the Regional Focal Point 2 staff members of Dikhil RC will provide their time to receive training on reforestation activities and to patrol and protect reforested areas Staff members of the RCs will support the work of the int. consultant to develop the regional adaptation plans, by facilitating meetings with relevant stakeholders and communities and providing access to required documents. Staff members of the RCs will provide support to organise and facilitate the regional validation workshops for the multi-sectoral risk and vulnerability assessments & regional adaptation plans RC staff members will provide their time to receive training on environmental management and climate change adaptation.	

Tadjourah RC: USD 84,500	Tadjourah RC will provide a fully furnished office for the Regional Focal Point 2 staff members of Tadjourah RC will provide their time to receive training on reforestation activities and to patrol and protect reforested areas Staff members of the RCs will support the work of the int. consultant to develop the regional adaptation plans, by facilitating meetings with relevant stakeholders and communities and providing access to required documents. Staff members of the RCs will provide support to organise and facilitate the regional validation workshops for the multi-sectoral risk and vulnerability assessments & regional adaptation plans RC staff members will provide their time to receive training on environmental management and climate change adaptation.
MEDD: USD 102,500	5 staff members of MEDD will provide time for training on M&E approach for EbA/ ecosystem restoration interventions MEDD will provide premises and staff time for the training of RC staff members on environmental management and climate change adaptation. MEDD will provide vehicle for the national PMU
ADIL: USD 542,500	The project supports the strengthening of the decentralisation of Djibouti by - updating local management tools (the RDPs) (*by 2022*) - increasing capacity of local authorities for local planning, including implementation of RDPs (*by 2024*). Overall, ADIL will support the implementation of project LDCF-4 especially the following outputs: - 2 local adaptation plans produced for the regions of Dikhil and Tadjourah - 2 staff members of Dikhil RC and 2 staff members of Tadjourah RC trained on environmental management and climate change - At least 2 staff members of each RC of Djibouti trained on mainstreaming adaptation into local planning
Total co-financing 17,112,500	

6) adaptation benefits (LDCF/SCCF)

Project interventions including planning and implementing grey and green adaptation options will benefit the inhabitants of both Dikhil and Tadjourah regions amounting respectively 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 170 hectares of acacia and other local 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[46][46]; iv) increasing water supply by increasing infiltration and promoting water conservation; vi) improving food security; and viii) decreasing incidences of disease[47][47]. The 20,000 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 and Lilya Bouri in Dikhil as well as Kalaf, Ad Bouya, Darkenle, and Sourat in Tadjourah ? see Table 8).

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, local communities and donors 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.

Table 8: Project direct beneficiaries

Total number of direct beneficiaries	*On-site beneficiaries*	*Governmental beneficiaries*
DIKHIL		**NATIONAL**
Regional level knowledge product and adaptation planning: 104,977 people including 49,339 women (*based on average of 47% women in population*)	As Eyla climate-resilient agriculture: 136 community members, including 26 women (household) trained ? that is 707 people directly benefiting from climate-resilient agriculture (*based on average of 5,2 people per household*).	20 staff members from MEDD, including 10 women
	As Eyla alternative activities: 118 women (*3 to become agricultural technicians; 35 on poultry raising; 50 on handcraft; 25 on charcoal production; 5 members of Gobaad cooperative*) and 37 men (7 to become agricultural technicians, 25 on charcoal production, 5 members of Gobaad cooperative) ? that is 802 people directly benefiting from climate-resilient economic activities (*based on average of 5,2 people per household*).	2 staff members per Regional Councils (10 in total including 5 women)

	Hanle climate-resilient agriculture: 75 community members, including 33 women (household) trained ? that is 390 people directly benefiting from climate-resilient agriculture (*based on average of 5,2 people per household*). Alternative activities: 6 women (1 *to become agricultural technicians; 5 members of Lylia Bouri and Koudi koma cooperative*) and 6 men (1 to become agricultural technicians, 5 members *of Lylia Bouri and Koudi koma cooperatives*) ? that is 62 people directly benefiting from climate-resilient economic activities (*based on average of 5,2 people per household*).	
TADJOURAH		**NATIONAL**
Regional-level knowledge product and regional adaptation planning: 102,329 including 48,094 women (*based on average of 47% women in population*)	Tadjourah-Ville flood protection: 20,000 people incl. 9,400 women (based on average of 47% women in population)	
	Tadjourah-Ville alternative activities: 204 women (including 4 *to become agricultural technicians, 50 on charcoal production, 50 on fodder production, 150 on handcraft)* and 106 men (including *6 to become agricultural technicians, 50 on charcoal production, 50 on fodder production)* ? that is 310 people directly benefiting from climate-resilient economic activities (*based on average of 5,2 people per household*).	
	Climate-resilient agriculture: 96 community members, including 35 women (household) trained ? that is 500 people benefiting from climate-resilient agriculture (*based on average of 5,2 people per household*).	
GRAND TOTAL		
207,306 incl. 97,433 women (*based on average of 47% women in population*)	22,771 incl. 10,702 women based on average of 47% women in population[48][48]	30 incl. 15 women

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 in one or both regions. 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.

7) innovativeness, sustainability and potential for scaling up

Innovativeness

The combination of green and grey technologies for adaptation to climate change, framed by science, is an innovative approach that will be implemented in Dikhil and Tadjourah regions. It is expected to reduce the frequency and severity of droughts and floods in Gobaad Plain, and floods in Tadjourah Ville caused by changes in rainfall patterns. 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. To further improve well-being and ensure the sustainability of its EbA interventions, the project will facilitate access to fuel wood ? a key driver of deforestation along Djibouti?s wadi banks ? and diversify livelihoods, through piloting innovative interventions in Djibouti. In particular, the project will promote the production of sustainable charcoal in both Dikhil and Tadjourah, using prosopis. FAO has developed a conceptual approach and feasibility study, which the project will help implement. These interventions are innovative solutions to address Djibouti?s high fuel wood reliance (because of a lack of alternative energy sources) and to control invasive prosopis species.

Currently, most projects in Djibouti focus on rehabilitation of gardens and common agropastoral plots, and enhanced water access; without tackling the underlying causes of droughts, reduced water availability and soil fertility losses, as does the proposed project. The project will innovate as it will not only support agro-pastoral activities through the rehabilitation of gardens and technical assistance, but also secure climate-resilient livelihoods in its target sites by promoting alternative economic activities that are adapted to the local context, make use of locally-available material. This will contribute to reduce pressures on the natural resources. This will further ensure the development of climate-resilient livelihoods in the target sites.

The proposed LDCF project also offers a new approach to support the decentralization process in Djibouti, by supporting local adaptation planning (through capacity building and access to finance). Climate risk maps and vulnerability assessments will serve to guide future climate-resilient development in the project?s areas; to ensure this, local adaptation plans will be developed for Dikhil and Tadjourah, and funding identified to ensure their implementation. These plans will be aligned with the revised RDPs, with a view to ensure climate-resilient development and land management in these two regions. To ensure these plans can be implemented beyond the project?s lifetime, a details financial assessment of pathways to leverage climate finance will be produced and recommendations made. Such climate finance is at the moment not available in Djibouti, and not sought after even in project supporting the decentralisation process, like ADIL project.

Sustainability

The sustainability of the project will be supported by: i) applying a ?training of the trainers? (ToT) approach that will ensure trainers, formed by the project, remain on the field after the project; ii) ensuring the commitment of local communities in project interventions (by signing contracts and providing technical support in exchange for tree planting); iii) providing training on the maintenance of the species and/or equipment used; iv) ensuring ownership of the tree and seed nurseries, as well as reforestation interventions through hand over to demonstration plot farmers and the RCs; v) strengthening cooperatives and ensuring they have a market to sell their products; and vi) through early

engagement with, and training of key government institutions, which will take over key project grey and green infrastructure at the end of its lifetime. In addition, it should be noted that MEDD will be trained during 15 days on EbA, M&E technologies for EbA, including use of drones and GIS maps; this will ensure MEDD is able to continue monitoring EbA activities in Djibouti beyond the project. Likewise, staff members of RCs are trained on environmental management and climate change, reforestation techniques and tree maintenance; they will be capacitated to ensure the long-term patrolling of reforested areas, and have confirmed during the project validation workshops their willingness to continue reforestation activities beyond the project?s lifetime. In Gobaad, the owners of the demonstration plots will receive the seed nursery on their plot at project?s end, in exchange for allowing trainers to use their plots for training sessions during the project. The owners of the plots who will be able to keep using it and sell the seeds to the rest of the community via the strengthened cooperatives. Finally, an exit strategy will be developed by the project with relevant stakeholders to ensure sustainability of project activities (including maintenance of tree and seed nurseries, energy centres for *prosopis* charcoal promotion, weirs and gabion walls) and long-term impact. While sustainability will be built in the design of each output, a robust exit strategy will summarize clear responsibilities and budget ? for all the expected results. This is key to supporting project continuity over the long term. The preparation of this strategy will start early in the project lifespan to ensure the continuous engagement and commitment of relevant stakeholders who will take over specific project interventions or equipment; and to ensure full community ownership.

Replication and Up-scaling

To further ensure the support to ecosystem restoration, awareness campaigns on adaptation technologies and the benefits of an approach using both EbA and grey infrastructure interventions, will be implemented in Djibouti using modern communication technologies including mobile phone applications and social media. Knowledge products will be packaged for different categories of users in rural and urban settings, and best communication channels chosen accordingly to ensure a wide outreach. Through capacity building, ecosystem valuation analysis, and a rigorous M&E system, the project will build 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; data on the benefits of EbA will be carefully compiled and shared. This will support the replication of successful project interventions across the country (national level). At regional level, replication of good practices will be encouraged through adaptation planning with the development of adaptation plans, and through training train staff members of the RCs in environmental management, climate change and monitoring of ecosystem restauration activities. At community level, successful demonstration plots will provide incentive for other community members in As Eyla and beyond to practice CRA. Finally, at international level, the project will support the participation of a staff members from MEDD to international events on climate change adaptation (on project Y 3 & 5). These events will be an opportunity to showcase the project?s impacts and approach to adaptation, as well as to share lessons learned and best practices along with the knowledge products developed by the project (e.g. ecosystem valuation, benefits of prosopis conversion into charcoal, climate risk maps and adaptation plans, as well as lesson learned fact sheets).

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[1] https://pubdocs.worldbank.org/en/209591619648937202/14538-IFAD-Djibouti-PROGIRES-fullproposal-clean.pdf

[2] See gender assessment Annex 8 for additional details on women activities in As Eyla and Tadjourah-Ville.

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[21] https://openjicareport.jica.go.jp/pdf/12183513_01.pdf

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[34] By concentrating the water flow locally, the gabion wall has favoured a turbulent flow responsible for a very clear scouring at its base, and an undermining of the banks downstream. As a result, the water flow leads to an acceleration of the regressive erosion endangering the gabion structure itself. This gabion has already been damaged and buried, in certain places, by the alluvial deposits.

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

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

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

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

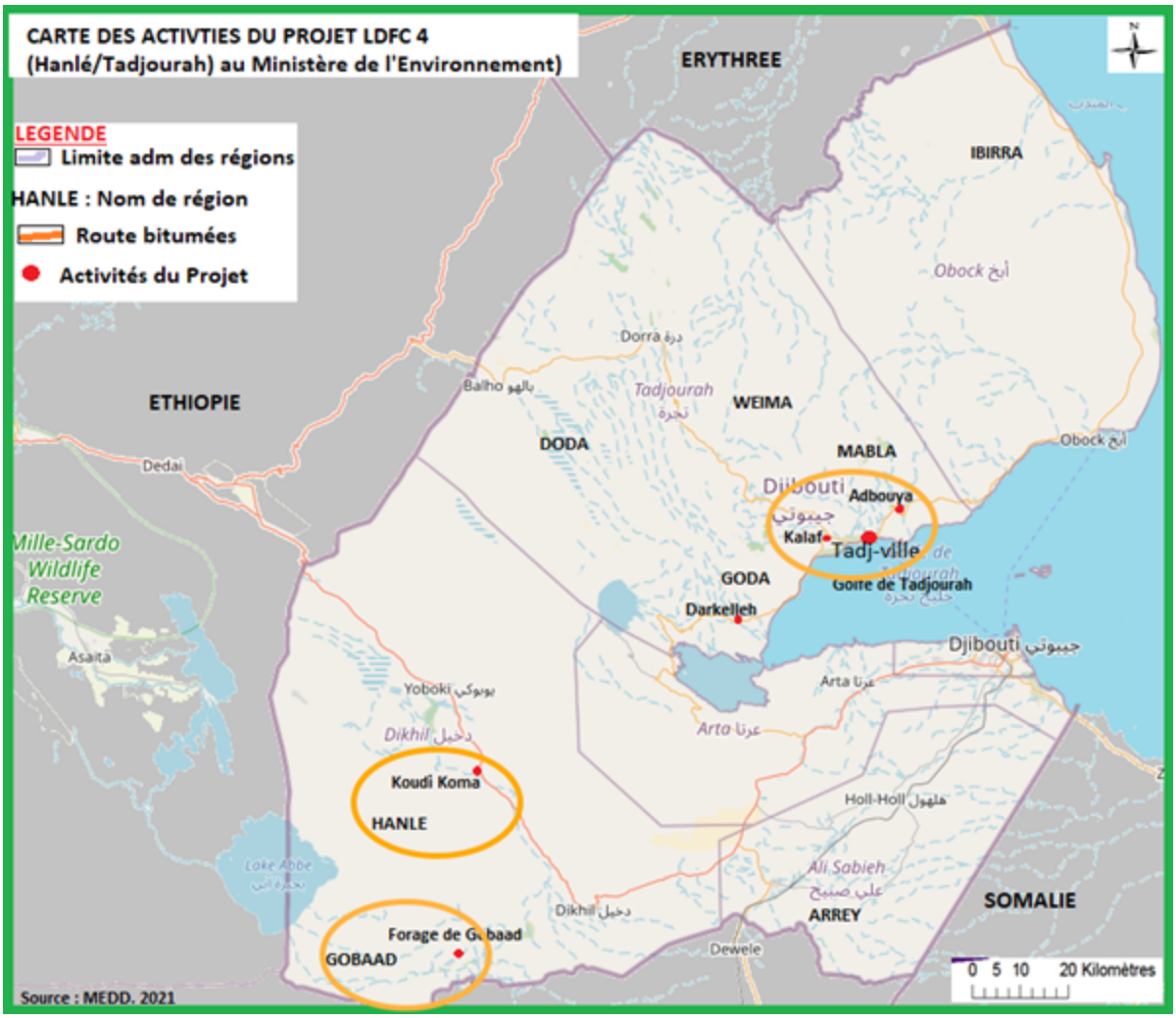
[48] Note that these 22,771 project beneficiaries are already included in the total of left column ? regional population.

1b. Project Map and Coordinates

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

1b. Project Map and Geo-Coordinates.

Figure 8: Project map



Adbouya ; N 11'51'34.8"
E 43'00'54.54.6"
Alt: 3012 m
Kalaf-village : N 11'45'31.28"
E 42'47'29.27"
Alt :12 m
Kourri (Kouddi-Koma) : N 11'21'09.9"
E 42'09'31.7"
Alt : 212 m
Forage de Gobadd : N 11'05'46.6"
E 42'10'0.51"
Alt : 407 m
Liliya-Bourri : N 11'25'38.27"
E 42'54'26.51"
Alt :163 m
Sourate : N 11'48'35'.17"
E 42'54'16.67"
Alt :127 m
Darkelleh : N 11'37'49'.57"
E 42'38'26.88"
Alt :247 m

1c. Child Project?

If this is a child project under a program, describe how the components contribute to the overall program impact.

2. Stakeholders

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

Civil Society Organizations Yes

Indigenous Peoples and Local Communities Yes

Private Sector Entities

If none of the above, please explain why:

Please provide the Stakeholder Engagement Plan or equivalent assessment.

Stakeholder Engagement Plan (full version can be found section 5 of Project Document)

Meaningful consultation and engagement processes is a strategic priority embedded in the environmental and social management system for UNEP and the GEF. It enhances project acceptance and ownership and strengthens the social and environmental sustainability and benefits of supported interventions. Information disclosure refers to the provision of timely, accessible information regarding the project and its potential social and environmental impacts to stakeholders in order to facilitate their meaningful, effective and informed participation in project design and implementation.

Engagement during the PPG phase

It should be noted that the project?s PPG phase started during the international COVID-19 sanitary crisis. This crisis challenged several key steps of the PPG phase, including the inception workshop, data collection on project sites including community consultations and stakeholder meetings. To address these challenges, the project team was set up to include four national consultants with technical expertise in agriculture, infrastructure, gender and environmental and social impact analysist; moreover, the MEDD supported project coordination through a national coordinator to facilitate contacts and data collection, coordinate and participate in the development stages of the project.

An inception call was organised at the beginning of the PPG phase to present the project as defined in the approved PIF, including its objectives, Outcomes and Outputs, its strategy and Theory of Change, the PPG workplan and calendar, as well as development methodology. Feedback was collected from the participating institutions, in particular to highlight other existing strategies or initiatives with similarities or complementing the project. At the end of the call, dates for a first field mission were approved.

Two field missions were organized from 14 to 18 February; and from 11 to 27 July. They were led by the four national consultants with expertise in: gender assessment; environmental and social safeguards; agriculture; and infrastructure. The missions were facilitated by the Ministry of Environment (MEDD). There were complemented by various face-to-face and online meetings with key government agencies, organisations and donors in Djibouti in order to ensure project alignment with Djibouti?s national priorities, and needs, as well as complementarity with existing or planned initiatives pertaining to climate-resilient agriculture, sustainable water access, flood protection and climate change planning in the regions of Dikhil and Tadjourah. Finally, a validation mission and workshop took place from 21 to 25 November 2021; and the validation workshop on 24 November (see Section 5 and Appendix 16 of Prodoc). The purpose was to present the project rational and interventions strategy to the GoD, regional authorities, relevant line ministries and project partners, as well as representatives of the beneficiary communities. Feedback served to revise the project document according to the Djibouti?s needs. The mission also contributed to support the collection of missing data, to fine-tune the project design and implementation arrangements.

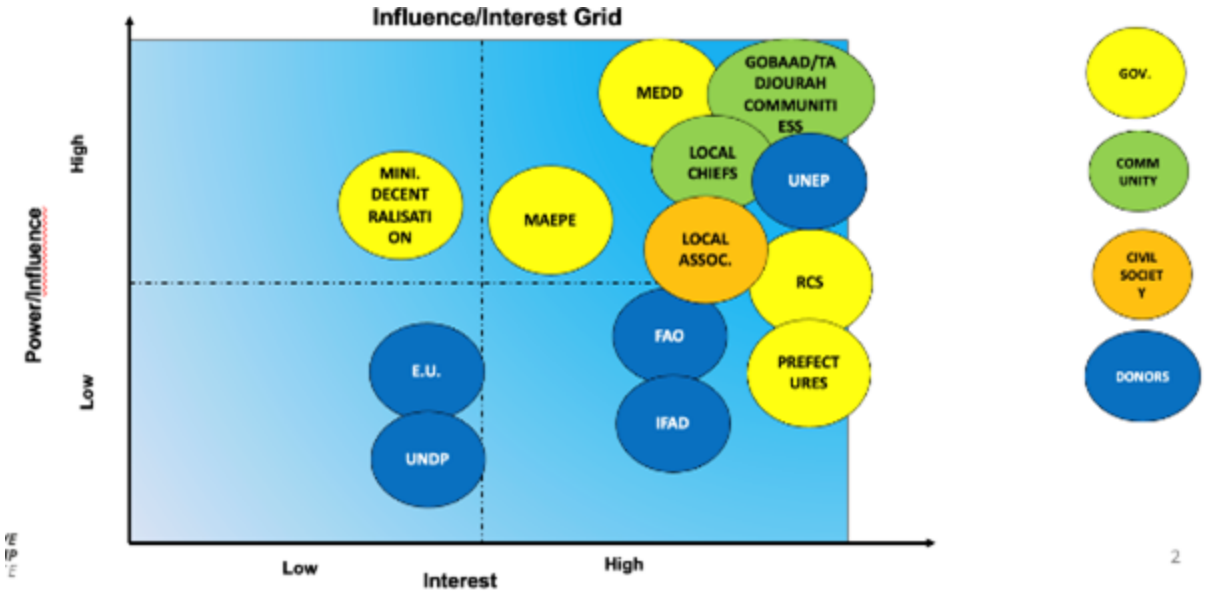
In addition, provide a summary on how stakeholders will be consulted in project execution, the means and timing of engagement, how information will be disseminated, and an explanation of any resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement

During the implementation phase, a participatory approach will be used across activities, to ensure the engagement of technical partners and beneficiary institutions and communities. For example, project beneficiaries of technical support will be identified and selected with the local chiefs and authorities based on transparent criteria including interest and availabiliy to fully engage. Communities will be consulted to refine the design of project interventions, for example on climate-resilient agriculture and alternative economic activities. Particular attention will be given to women, to clearly identify their needs and pathways to support them through the project (see below and the gender assessment). Agronomical training will be provided to interested farmers in exchange of their commitment to participate in reforestation activities, and to protect tree cover.

Stakeholder mapping

The project will engaged with more or less significance various stakeholders, from the civil sociaty to governmental bodies and donors. Each of the identified stakehodelrs ? namely farmers in Dikhil, city dwellers in Tadjourah-Ville, local associations, and leaders, MEDD, MAEPE, the Ministry of Decentralisation, the Ministry of Finance, the regional Councils of Dikhil and Tadjourah, UNEP, FAO, UNDP, E.U. and IFAD ? have various level of interest and influence over the proposed project as described in Figure 9. The project team will especially engage with stakeholders having the highest level of influence and interest in the project to ensure smooth implementation, as well as complementarities and synergies with other initiatives.

Figure 9: Stakeholder mapping



Stakeholder engagement plan

The project is underpinned by community-based natural resource management. Therefore meaningful, effective and informed consultation processes will be critical to the success of the project. The project will seek to identify priorities of stakeholders and provide them with opportunities to express their views at all points in the project decision-making process on matters that affect them. Meaningful, effective and informed consultation processes will possess the following characteristics :

? Free of external manipulation, interference, coercion, and intimidation.

? Gender and age-inclusive and responsive.

? Culturally appropriate and tailored to the language and accessibility preferences and decision-making processes of each identified stakeholder group, including disadvantaged or marginalized groups. Where applicable, includes differentiated measures to allow effective participation of disadvantaged or vulnerable groups, including persons with disabilities.

? Based on prior and timely disclosure of accessible, understandable, relevant and adequate information, including draft documents and plans.

? Initiated early in the programme implementation, continued iteratively throughout the programme and project life cycle, and adjusted as risks and impacts arise.

? Addresses social and environmental risks and adverse impacts, and the proposed measures and actions to address these.

? Seeks to empower stakeholders, particularly marginalized groups, and enable the incorporation of all relevant views of affected people and other stakeholders into decision-making processes, such as

project goals and design, mitigation measures, the sharing of development benefits and opportunities, and implementation issues.

? Documented and reported in accessible form to participants, in particular the measures taken to avoid or minimize risks to and adverse impacts on the project stakeholders.

? Consistent with the States' duties and obligations under international law.

A comprehensive SEP was developed in Section 5 of the Prodoc; it is inclusive of all the stakehodlers identified under Figure 8, and for each of them comprises a specific engagement strategy, means of verification and responsibilities.

Grievance Redress Mechanism

The project?s Stakeholder Engagement Plan and Grievance Redress Mechanism is detailed in Section 5 of the Prodoc, including how to make a complaint and/or grievance. All complaints and/or grievances regarding social and environmental issues can be received either orally (to the field staff), by phone, in complaints box or in writing (email) to UNEP Regional Office. A key part of the grievance redress mechanism is the requirement for the Project Management Team to maintain a register of complaints and/or grievances received at the respective project sites. The Social and Environmental Compliance Unit investigates allegations that UNEP?s Standards, screening procedure or other UNEP social and environmental commitments are not being implemented adequately, and that harm may result to people or the environment.

Select what role civil society will play in the project:

Consulted only; No

Member of Advisory Body; Contractor;

Co-financier;

Member of project steering committee or equivalent decision-making body; No

Executor or co-executor; Yes

Other (Please explain)

3. Gender Equality and Women's Empowerment

Provide the gender analysis or equivalent socio-economic assesment.

A gender assessment and action plan were developed for the proposed project (Full version available Appendix 13 of the project document). The assessment indicates that women in Dikhil and Tadjourah live in a more precarious situation than men. During the field visits carried out by the project team, the women indicated that they were confronted with climate and socio-economic difficulties. With regards to climate, they mentioned the frequent occurrence of droughts, and extreme rainfalls, soil aridity and insect attack impairing agriculture, as well as floods. In addition, women mentioned their lack of support and technical assistance for agriculture or other alternative activities, including difficulties in obtaining raw materials for craft-making, the lack of marketing infrastructure and the lack of supervision, which hinders the production and sale of handicrafts.

To tackle these issues, the project has designed specific women-oriented activities, including gender-sensitive agricultural training and support to craft-making and poultry raising (see gender strategy). All training will be organized to suit women?s interest and availability; they will be led by female trainers ? as far as possible. For example, the project will ensure the presence of female agricultural technicians on all sites. Moreover, women?s inclusions in all project interventions will be ensured by the inclusion of two gender experts ? national and international ? in the project team. They will ensure the implementation of the gender action plan, developed in Appendix 13 of the Prodoc.

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;

Improving women's participation and decision making

Generating socio-economic benefits or services or women Yes

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

Yes

4. Private sector engagement

Elaborate on the private sector's engagement in the project, if any.

The private sector is very nascent in Djibouti. The project will hire private companies to implement specific interventions such as the construction of weirs and dykes on wadis, tree nurseries and the rehabilitation of water-related equipment. Please see Figure 10 on implementation arrangements

5. Risks to Achieving Project Objectives

Elaborate on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, the proposed measures that address these risks at the time of project implementation.(table format acceptable):

Table 9: Risks and mitigation measures

#	Description	Potential consequence	Countermeasures	Risk category and rating[1]	Probability & impact (1?5)
National-level risks					

1	Limited inter-sectoral collaboration/ unwillingness to work together or share information (across scale and between sectors) during project implementation 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. Conflicts or disagreement between institutions can lead to blockages contributing to delayed implementation.	The project implementation arrangements have been discussed with all partners during the PPG phase, and approved. An inception workshop will be held for representatives from relevant institutions at the onset of project implementation to remind and validate the roles, responsibilities, and priorities of each participating stakeholder. The implementation arrangements will be fully integrated in the partnership agreements that will be signed before project start up. Moreover, the project coordinator supported by the lead execution entity (MEDD) will organize regular meetings with the different implementing partners to ensure follow-up, coordination and information exchange. Finally, the project will empower government departments to lead, support or participate to the execution of activities relevant to their mandate through the establishment of appropriate inter-ministerial agreements.	Operational S	P = 3 I = 4

2	Lack of political will to implement proposed LDCF project activities.	Loss of government support (e.g. in the context of a world-wide crisis like COVID-19) may result in the lack of prioritisation of project activities.	The PPG phase has actively engaged with the Ministry of Environment, to increase the motivation to implement the project effectively. In addition, the project will: - Organise bi-annual project steering committee meetings to keep up engagement and stake in the project. - Organise regular stakeholder consultations to promote government support of the project. - Involve government stakeholders in all decision-making[2] 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. These methods are described in the Stakeholder Engagement Plan (SEP).	M	P = 2 I = 4

3	High turnover of staff members in executing agency and local partners (regional institutions).	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 project inception workshop will be organised at inception to discuss these risks with relevant government stakeholders and identify solutions. Moreover, several national and regional government representatives have been involved in the project from its inception to ensure that there is continuity of government involvement through the course of the proposed LDCF project. It should be noted that key counterpart with the Ministry of Environment ? namely the Secretary, the Director and Vice-Director ? have been within the ministry for years now, and involved in the execution of LDCF-1, 2 and 3. Moreover, Djibouti is accelerating its decentralisation process, therefore capacity building within regional institutions ? as proposed by the project ? is key to support government?s decentralization objectives.	Operational M	P = 2 I = 4

4	Low technical capacity. Finding qualified and reliable local expertise	Could lead to delays in contracting and affect the quality of deliverables and therefore activities? implementation	The project will rely on key implementing partners with past experience and high-quality track records. To ensure high technical capacity to implement the various project?s Outputs, partnerships have been sought to support project implementation. Key partners have been pre-identified during the PPG phase to facilitate recruitment of key expertise at project?s onset. The project will also make use of contacts made during past projects. For example, the project LDCF-2 has worked with an international consortium to conduct climate change modelling studies and vulnerability assessments due to a lack of expertise within Djibouti. The same consortium could be solicited to conduct output 3.1 of the proposed project. Put into place a procurement monitoring plan to check compliance with international monitoring standards; and set up robust performance evaluation of project staff and consultant with accountability to result	Operational S	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/adaptation gains of the project	Experience for rigorous hand-over of hard infrastructure will be gained through GEF project LDCF-2. Moreover, a strong exit strategy will be prepared for the project. All relevant stakeholders will be engaged in project activities. Awareness on the benefits of project intervention will be raised. Capacity of national and local authorities to plan, fund and mainstream adaptation into development planning will be increased. When possible, a contribution will be required from the project beneficiaries for the equipment procured by the project (for example, cooperatives will co-finance processing equipment).	Organisational S	P = 2 I = 3

6	Fiduciary risk	Could lead to delays and failure to deliver due to poor fund management	A fiduciary capacity need assessment has been developed during the PPG phase based on the micro-HACT assessment of the Ministry and audit reports and management letters from the two first LDCF projects implemented in Djibouti. The result highlight a medium risk that can be managed by the identification of key implementing partners and the capacity building and follow-up provided by UNEP to the project management unit and the ministry. Specific trainings of key PMU staff members like the financial assistant will be organised during the project implementation.	Operational M	P=2 I=4

7	Co-financing does not materialize as planned	Could affect the delivery of project?s expected impacts	The project implementation includes the organization of monthly coordination meetings and a co-finance working group. The meetings and group will be chaired by the project director and include co-financing institutions/ project coordinator of identified cofinancing initiatives. They will serve to update project teams on projects? progress and planned interventions. In case of unexpected changes in the co-financing initiatives, or planning for new relevant initiatives, the project will adjust the co-financing strategy accordingly.	Operational L	P=2 I= 1
Local level risks					

8	Limited participation in activities and acceptance/adoption of adaptation interventions by local communities.	Local communities may not actively participate in activities including training by lack of interest or time or due to lack of understanding of the benefits. This might result in a limited adoption of 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 involvement has been an issue in the previous LDCF project. To mitigate this risk, the project design relies on good practices and lessons learned from other organisations promoting agriculture in Djibouti. For example, it was decided to provide technical support to agriculture for existing, active farmers in As Eyla, who rely on this activity as their main livelihoods. This is based on good practices developed by FAO and on experience under GEF project LDCF-2. The beneficiaries will be subjected to regular performance reports to ensure their continuous commitment in the project, in exchange for technique and material support. Special attention will be given to engaging with village elders and head of local communities to ensure their support. Moreover, the project will ensure delivering appropriate on-the-ground support, by working with	S	P = 1 I = 4

9	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, destruction of key infrastructure and negative impact on livelihoods and economic activities	Based on previous project experience in Djibouti, there is a significant risk that climate-related hazards damage project interventions. This includes, for example, high wind and strong rainfalls that can destroy crops; or more intense floods that can damage dykes, gabion walls and wells. To reduce this risk, EbA and other adaptation interventions will be designed to withstand current and future climate variability. Based on lessons learned from project LDCF-2 and 3, particular attention will be given to mainstreaming adaptation into the design of infrastructure such as gabion walls, tree nurseries and wells; rehabilitated gardens will also be protected from climate extremes like floods and strong winds. An adaptation specialist will be included in the project team to insure these inclusions. In addition, the planned EbA interventions will contribute to protect infrastructure, equipment and properties provided by the project. For example,	Environmental S	P = 2 I = 4

10	Cost of infrastructure interventions are under-estimated.	The budget allocated to other activities like training, capacity building and sensitisation is re-directed towards infrastructure.	The project budget has been prepared to include possible inflation on the cost of large infrastructure for which the material comes from overseas. Moreover, the project is focused on repairing or building a limited number of large infrastructures. The project team will ensure that all changes in the project budget is approved by the PSC before acted.	M	P = 3 I = 3

11	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; this is a key reason to complement hard infrastructure ? which are costly ? with EbA interventions that will upscale project?s impacts. Moreover, the experience gathered under LDCF 1 and LDCF 2 as well as other projects will facilitate the design of suitable and cost-effective interventions under the proposed LDCF project (see baseline section 2.1.6). Finally, based on experience from LDCF 2 project and FAO, the proposed project will only work with existing farmers, who own their own gardens and have experience practising agriculture.	Economic L	P = 2 I = 3

12	Insufficient surface water and groundwater available for EbA in Gobaad Plain.	Failure to effectively carry out EbA interventions.	Infrastructure for water conservation and improvement of the underground water recharge 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. EbA (reforestation) will complement infrastructure to improve groundwater recharge and water filtration near water-related infrastructure. These interventions will be supported by appropriate international expertise to complement existing country expertise.	Environmental S	P = 3 I = 4

13	Lack of women?s participation in the project implementation	Women do not benefit from the project?s interventions. Limited empowerment of women.	Integrate good practices to support women?s participation and empowerment; as well as lessons learned from other projects. For example, project LDCF-2 has implemented women-specific activities, which have yield direct profits for women (poultry raising; craft-making). These interventions can be replicated on project?s site, if women express their interest. Several focus groups were conducted during the field missions to understand women?s climate change vulnerability and to identify, with them, solutions to address this vulnerability. Women-specific training modules and activities, which were discussed and validate with them, have been included in the project?s design. A comprehensive gender assessment and action plan is submitted as Annex to the project.	Social/cultural M	P = 2 I = 4

14	COVID crisis	Could lead to significant delays in project implementation	While delays may be experienced if further restrictions are implemented in Djibouti or in the rest of the world especially linked to travel, several aspects of the design will ensure project implementation is not fully stopped. First, where possible, the project will work with national compagnies and associations: this will ensure they are based in Djibouti and their work is not impaired by travel restrictions. Second key consultants for example to support agricultural activities, M&E and gender inclusion, are national; their work will be supported by international experts; however this could be done remotely if travel restrictions are in placed (e.g. using WhatsApp group chats and calls). Finally, the CTA will be working full-time during the project?s first year to fully support its implementation.	Operational H	P = 3 I = 2

Environmental and social safeguards

The UNEP Safeguard Risk Identification Form (SRIF; Appendix 12 of the Prodoc) was completed to assess the safeguards risks associated with the implementation of the project. This tool reviews the project against eight safeguards standards, in line with UNEP?s Environmental and Social Sustainability Framework (ESSF). The overall safeguards risk rating for the project is ?moderate? because potential negative impacts identified are limited in scale to programme/project, are not unprecedented or irreversible and could be amenable to management using standard mitigation measures. The main risks identified are in safeguards 1 (Biodiversity, Ecosystems and Sustainable Natural Resource Management), safeguards 2 (Climate Change and Disaster Risks) safeguards 3 (Pollution Prevention and Resource Efficiency) and safeguard 6 (Displacement and Involuntary Resettlement). Other Safeguard Standards were all ranked low risk. An Environmental and Social Impact Assessment and its associated Environmental and Social Management Plan (ESMP) are included as Appendix 12 of Prodoc. This outlines the most significant risks identified through the SRIF screening process, as well as the measures to be undertaken to further assess, mitigate and monitor these risks. The project Executing Agency will have the overall responsibility for ensuring that the required assessments, mitigation measures, monitoring and reporting are undertaken. This responsibility will be reflected in the legal instrument to be signed between UNEP and MEDD. MEDD will report to UNEP on these aspects in biannual project progress reports

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[1] L=Low; M=Moderate; S=Substantial; H=High

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

6. Institutional Arrangement and Coordination

Describe the institutional arrangement for project implementation. Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.

The project will be implemented over a six-year period (see Appendix 5 for the project work plan and timeline). The United Nations Environment Programme (UNEP), through the Climate Change Adaptation Unit (CCAU) of the Ecosystems Division, will act as the implementing agency of the project and the Ministry of Environment and Sustainable Development (MEDD) will act as the Executing Agency. A Project Management Unit will be established by the Executing Agency and will be responsible for managing the project?s daily operations. A Project Steering Committee (PSC) will meet biannually to steer project execution.

United Nations Environment Programme (UNEP)

In its role of Implementing Agency for the project, UNEP will oversee the project and provide the technical assistance required to achieve its objective, and to ensure consistency with GEF and UNEP policies and procedures. This supervision will be the responsibility of the Climate Change Adaptation Unit?s Task Manager (TM), who will be appointed by UNEP. The TM will formally participate in the following: (i) Project Steering Committee (PSC) meetings; (ii) mid-term and final evaluations; (iii) the clearance of Half yearly Progress Reports and Project Implementation Reviews, expenditure reports and budget revisions; and (iv) the technical review of project outputs v) regular supervisory missions for

oversight and adaptive management to ensure the achievement of project targets and objective and provide capacity building. Moreover, training of PM and Finance officer will be organized by UNEP every two years and UNEP will also support exchange of experience between the different teams of the various project it implements through webinars and other online events. UNEP will contribute to raising the visibility of the projects through communication support: the development of articles and integration case studies for bigger publications.

Ministry of Environment and Sustainable Development (MEDD)

The MEDD will act as the lead executing agency for the project. In this role, it will provide technical support to the project through its Direction of Environment and Sustainable Development and take the responsibility for delivering the proposed activities and outputs. It will host and manage the Project Management Unit (PMU) and oversee the recruitment and contracting of the project personnel in collaboration with UNEP. The Ministry?s Director of Environment and Sustainable Development will take the role of project director. The Ministry?s Deputy Director will provide close support and guidance to the PMU and organize regular coordination meetings with all other initiatives and projects implemented by the Ministry to reduce duplication and build synergies. More specifically, MEDD will be responsible for supervising all technical and substantive issues of the project as well as provide guidance on all administrative issues. It will conduct regular performance of project staff and take appropriate mitigating measures to improve the efficiency of the PMU when needed. The MEDD will support the work of project staff and consultants by providing office space, vehicles acquired through the LDCF-2 project and other logistical support.

Project Management Unit (PMU)

The process of hiring project staff will begin shortly after the signing of the Project Cooperation Agreement (PCA) between UNEP and the MEDD. Arrangements will build on lessons learned from various projects, including the project LDCF-2 Implementing adaptation technologies in fragile ecosystems of Djibouti?s central plains (GEF ID 5021). UNEP will be involved in the recruitment processes of key project staff which will be led by the MEDD and its non-objection right will be included in the PCA.

A **Project Manager (PM)** will lead the PMU and execute the day-to-day management of the project. He/she will operate in a transparent and efficient manner, in line with budgets and work plans. In addition, the PM will report monthly to the TM on progress and challenges encountered on the ground in carrying out project activities. In particular, the PM will (with support from his assistant) (i) lead the day-to-day planning and implementation of the project in close collaboration with and under the supervision of the MEDD; (ii) provide on-the-ground information for progress reports; (iii) manage the project team and consultants, service providers to ensure a culture of performance and result; iv) engage with all relevant stakeholders; (v) organise the PSC meetings; (vi) provide managerial support to the project, including measures to address potential external and internal project implementation issues; (vii) manage the project budget and resource allocation; and (viii) participate in training activities, report writing and facilitation of consultant activities. In addition, the PM will meet with the co-finance and partner projects twice a year, or more often if necessary, as part of a consultation and coordination working group. The focus will be on sharing lessons learned and preventing duplication of activities and facilitating regular reporting. Please refer to Appendix 7 of prodoc for full ToRs of the Project Manager.

The PM will be assisted in the implementation of the project by an international **Chief Technical Advisor (CTA**), who will be hired as full-time staff member during the first year of the project; then part-time. The CTA will contribute to the successful implementation of the project by providing Ecosystem-based Adaptation (EbA) technical expertise, project management guidance and capacity building to the project team. S/He will be in charge of ensuring the implementation of the project M&E plan, GAP, ESMF and ESIA. The CTA will establish a performance monitoring framework to set bi-annual and mid-term targets for the project to meet the targets, outcomes and objectives defined in the project document by the end of the implementation phase; and a performance monitoring framework to assess the performance of project beneficiaries on agricultural fields and reforestation activities. S/He will also be in charge of measuring project and GEF Climate Change Adaptation Results Framework indicators annually to assess the project's progress in achieving its targets and prepare PIRs. S/He will also ensure the inclusion of environmental and social safeguards in project implementation, and support gender inclusion with support from the gender consultants. The CTA will report to the PMU and PSC on project performance, based on planned project outputs and outcomes, as well as the project indicators In addition, his/her key tasks are to (i) set up strong basis for implementation, (ii) provide overall technical backstopping for the project, (iii) provide advice on best suitable approaches and methodologies for the timely achievement of project targets and objective,(iv) support planning the implementation through workplan and budget revision, (v) draft key ToRs, (vi) coordinate the progress reporting, (vii) assist on knowledge management and collection of lessons learned, (viii) develop and coordinate the implementation of the project?s sustainability strategy. (see Appendix 7 of the project document for full ToRs)

The PM will also be supported by a **Project Officer**, as a full-time function over the course of the project. The Project Officer will be the main focal point for project communication and knowledge management. S/He will be in charge of ensuring all project-related communication, including posting knowledge products and reports on MEDD website, liaising with partner institutions and organisations to disseminate knowledge products, and supporting the Environmental Day and other sensitisation events. S/He will also be in charge of liaising, coordinating and organising meetings (like the monthly coordination workshop and co-finance working groups ? see below), support the organisation of project-related workshops, and consultations with the project partners and beneficiaries, and to ensure the implementation of the SEP. S/He will also support data and information production and collection to feed in the annual PIR (prepared by the CTA), the MTR and TE (conducted by independent international consultants). The Project Officer will be in charge of collecting project lessons learned and prepare fact sheets that are updated on a regular basis (Activity 3.2.4) ? with support from the Regional Focal Points and CTA. Finally, he will ensure communication on project site about the project grievance mechanism with support from UNEP and CTA (see Appendix 7 of the project document for full ToRs).

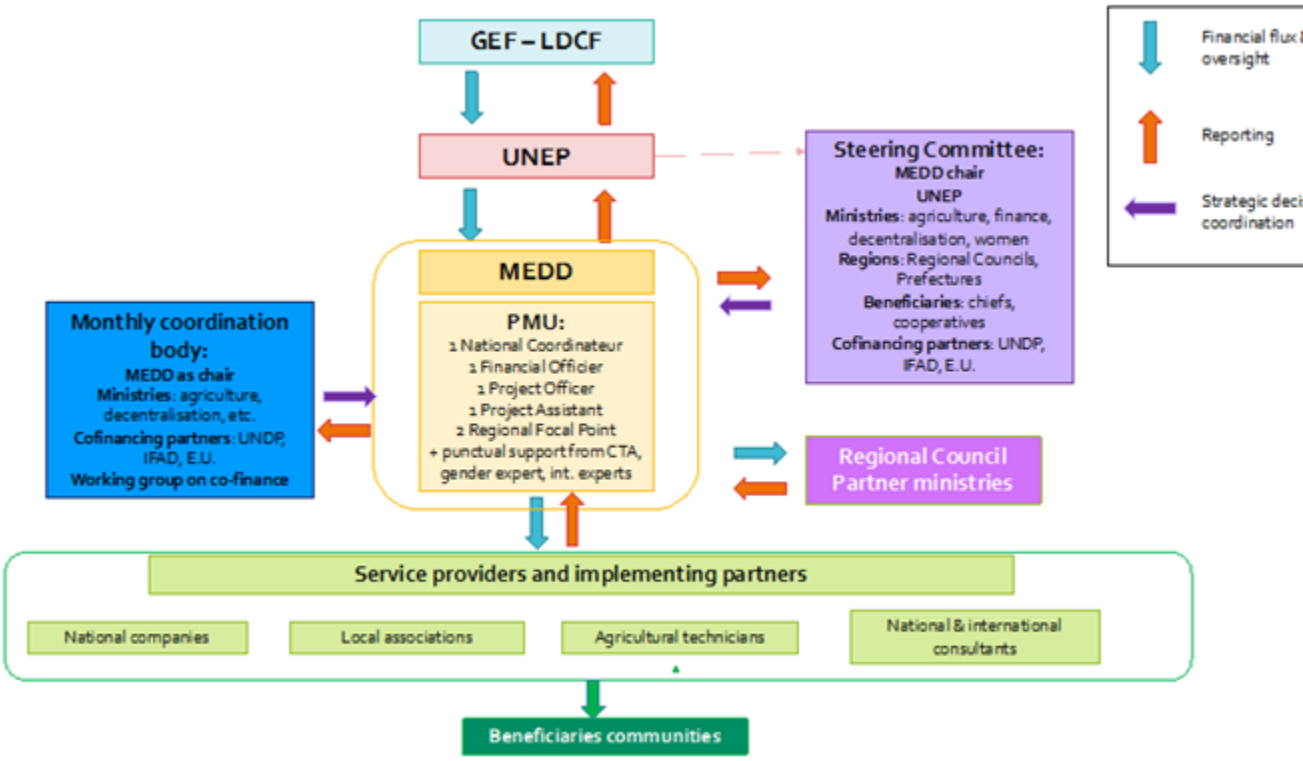
National and international gender consultants will be hired to support specific activities and implement the project gender action plan; they will be supervised by the CTA. The CTA and PM will monitor progress on the ground and will be responsible for implementing these corrective actions until a satisfactory level of women's participation is achieved.

In the field, the PM will be supported by two **Focal Points**, in Tadjourah and Gobaad. Their essential tasks on the ground will be to support the PM as follows: (i) support the timely execution of activities on the ground and the achievement of expected results; (ii) promote dialogue between stakeholders, particularly at

the local level; (iii) monitor and analyse progresses and blockages on implementation of project activities; and (vi) facilitate the participation of rural communities in project activities especially women. To achieve this, they will be hosted by Regional Councils and will use the offices equipped under the project LDCF-2. They will also be required to visit the intervention sites regularly and to work closely with stakeholders, including community, regional and local structures and with the PM.

A **financial officer** will be recruited on a full-time basis to support the PM and the experts. He/she will assist project staff in equipment, logistics and administration, manage the project's accounts and prepare expenditure reports to UNEP standards. The procurement of services, goods and works for the project will be done in accordance with national procurement regulations. (see Appendix 7 for full ToRs).

Figure 10: Implementation arrangement



Implementing partners

The project will contribute to building the capacity within MEDD and strengthening key processes. Identification of implementing partners needed to support timely and successful implementation will be coordinated and supervised by the ministry. This will bring the right expertise especially in areas that have shown some weaknesses in past projects. National and international consultants, technical experts, compagnies and organisations will be hired for all tasks requiring specific expertise. International technical assistance will be provided for specialized tasks only where existing national capacities are insufficient and need strengthening. Appropriate international expertise will be sourced with the support of UNEP?s

network for procurement of consulting services, in collaboration with the PM and MEDD. Although the private sector is limited in Djibouti, private compagnies will be recruited by MEDD to implement specific activities especially those linked to the construction of grey infrastructure (based on a call for tender). At project inception, a thorough capacity assessment will be conducted on the pre-identified project partners and local organisations which are active in the project sites (see table 10 of Prodoc). This will serve to identify the best, most experienced and locally appropriate organisations to implement most efficiently and successfully project specific interventions, in particular relating to agriculture.

Project Steering Committee (PSC)

The PSC is responsible for providing overall guidance on project implementation. It will oversee the work of the PMU and make management decisions. The PSC will also play a critical role in the monitoring and evaluation of the project and make sure that the results of evaluations are effectively and efficiently used to enhance project performance, accountability and learning. Furthermore, it will be responsible for approving strategic decisions and annual work plans, setting project direction, reviewing progress of the project, approve corrective measures to respond to upcoming challenges and identifying additional funding for the implementation of the project, as necessary. (full ToRs are included in Appendix 7 of project document).

The PSC will include (i) national representatives from the MEDD and all line ministries with areas of work relevant to the project including the Ministry of Agriculture and the National Direction of Water, (ii) local authorities (iii) executing and co-financing partners, as well as representatives of targeted local communities and community leaders in order to provide grassroots inputs and to offer more opportunities for participation, which will contribute to ensuring local ownership and guidance for the project. The composition and mandate of the PSC will be formalized at the project inception phase. The Secretary General of the MEDD will chair the PSC. The PSC will meet twice a year, with location rotating between Djibouti-Ville, Tadjourah and Dikhil (the two project target regions), and additional ad hoc meetings will be held, if necessary, to discuss key project performance indicators and to provide guidance on project direction.

Monthly coordination body and cofinance working group

The project implementation includes the organization of monthly coordination meetings and a co-finance working group. The meetings and group will be chaired by the project director, facilitated by the national project manager supported by the project officer, and include co-financing institutions/ project coordinator of identified cofinancing initiatives. They will serve to update project teams on projects? progress and planned interventions. In case of unexpected changes in the co-financing initiatives and plans, or if new relevant initiatives or interventions are planned by project partners, the project will adjust the co-financing strategy accordingly to ensure synergies, complementarities and avoid duplications. Gender will be the focus of a specific discussion as part of the co-finance working group established by the project to support coordination and follow-up between the project and its co-financing initiatives

7. Consistency with National Priorities

Describe the consistency of the project with national strategies and plans or reports and assesments under relevant conventions from below:

NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.

7. Consistency with National Priorities.

Describe the consistency of the project with national strategies and plans or reports and assessments under relevant conventions from below:
The government of Djibouti (GoD) is committed to reduce the climate change vulnerability of rural and urban communities in Djibouti. This commitment is underpinned by several national policies and strategies, as well as plans and programmes under international conventions. The proposed project is aligned with these policies and strategies.

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

- 2.3 By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment

- 2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality

- 6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity

- 6.5 By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate

- 6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes

- 6.b Support and strengthen the participation of local communities in improving water and sanitation management

- 9.a Facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support to African countries, least developed countries, landlocked developing countries and small island developing States

- 13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

- 13.2 Integrate climate change measures into national policies, strategies and planning

- 13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

- 15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world

- 15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species

Djibouti?s **National Adaptation Programme of Action** (NAPA, 2006) 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** (published in 2010) 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.

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. The **Third National Communication** (TNC) was recently drafted (July 2021). It will be presented at the GoD for validation before disseminated widely.

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, 2002[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 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/00/4?me 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; 2018-2022). The UN system in Djibouti has been supporting the country's national development policies for many decades through four-year partnership cycles. The guidelines for this support are set out in a strategic document called the United Nations Development Assistance Framework (UNDAF), which describes the collective response of the United Nations system to the development priorities of the Government of Djibouti. The document also sets out guidelines for the activities of the UNCT incurrent UNDAF runs from 2018 to 2022 and was signed with the Government in May 2016. It represents a commitment by the United Nations system in Djibouti to pursuing, in close collaboration with the Government and the country's development partners, the achievement of national development priorities. These include i) youth, education and employment; ii) leveraging of public and private finance for development; iii) improved access to basic services including water and food, especially reaching the most vulnerable; and iv) regional collaboration with neighbour countries. The proposed LDCF project will contribute to priority i) by building knowledge on EbA and raising awareness among local communities including youth. It will also contribute to priority ii) by identifying pathways to increase climate finance in Djibouti, which is necessary to ensure the sustainability of hard-won development in the country. Finally, it will contribute to priority iii) by improving access to water and food within the vulnerable communities of the country.

The proposed LDCF project is aligned with the **National Programme against Desertification** (PNLD, 2000) implemented by the MAPE-RH. In particular, PNLD promotes: i) sustainable use of natural resources; and ii) socio-economic activities in rural areas.

The proposed LDCF project supports **Djibouti?s Constitution**, which promotes gender equality; and **the National Strategy for the Integration of Women in Development** (**Law n?173/AN/02/4th, 2002)**, which aims to promote the participation of women in decision-making (public and private sphere), in economic development, in improving equal access to schooling, literacy, education, in the promotion of reproductive health, etc.

Finally, the proposed intervention strategy is also in line with the land laws of the country. Two land laws are juxtaposed on the territory of Djibouti: traditional law, which is centuries old and was created to respond to the constraints of the environment and a nomadic society, and modern law which is more recent

and officially fall under state jurisdiction[4]. Traditional law is observed in most rural areas especially in Afar territory as in Dikhil and Tadjourah regions while modern law prevails in the main cities. While only modern land legislation has legal power, in practice, state authorities take customary practices into account in land management. Customary authorities are still very much involved in the management of land use and land conflicts. In rural areas, the project will support already established agro-pastoral perimeters created by the LDCF-2 or existing privately owned gardens. Reforestation will be taking place in those same plots / gardens. For the rest of the activities the project will rely on both local and customary authorities to select specific intervention sites and target beneficiaries. Appropriate safeguards and grievance mechanism will be put in place to channel potential complaints and prevent risks of conflict.

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

[2] Programme National de D?veloppement Sanitaire.

[3] Loi-cadre sur l?Environnement.

[4] For more information, please refer to section on ?access to land and land management? in Appendix 13: Gender Assessment and Action Plan (Prodoc p310).

8. Knowledge Management

Elaborate the "Knowledge Management Approach" for the project, including a budget, key deliverables and a timeline, and explain how it will contribute to the project's overall impact.

Component 3 is key to the communication and knowledge management for policy change. Information will be collated 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.

The project will generate new knowledge on the socio-economic and environmental benefits of combined green and grey infrastructure for climate change adaptation in Djibouti; such knowledge is currently unavailable. Ecosystem valuation analysis will provide scientific evidence to leverage future investments in EbA in Djibouti, from public and private sources. Such sources will be studied and identified through a detailed financial analysis, to be conducted under Component 3 of the project. Overall, Component 3 of the proposed project 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, and possible other countries[1].

Knowledge management to capture, document, and share the data, knowledge products, lessons learned and best practices generated by project activities will be coordinated by the PMU ? in particular the Project Officer with support from the CTA. It will ensure the accessibility of the materials and tools produced through this project. This dissemination effort will be supported by UNEP via its website and networks

The website of MEDD will be the main platform used for knowledge management, dissemination, and communication. It will serve to share lessons learned and best practices for EBA and ecosystem restoration in wadi landscapes. This will encourage alignment among national initiatives to restore degraded wadis. Lessons learned will be captured on a regular basis by the Project Officer, and with support from the regional Focal Points, to ensure no data losses.

Public awareness raising will take place at different levels and with different purposes:

- At the project sites, awareness raising will be conducted to support activity implementation, especially during the reforestation of wadi banks. Communities, who will be directly engaged in the reforestation activities, will also be sensitised on the importance of reforested wadi to protect against flood risks and provide ecological and socio-economic good and services; they will be sensitised on the need to protect trees. This sensitisation process will also be informed by the ecosystem valuation study conducted under Output 3.2., demonstrating the socio-economic benefits of EbA. Sensitisation on agricultural plots will also target the need to use water sustainably, and to sustainable manage soil and provide fertilisation. In Tadjourah-Ville, it will also cover the need for conscious waste disposal to avoid obstruction of the water courses in the wadi and drainage systems and use of sustainable charcoal to reduce deforestation.

- At the regional level, specific campaign will be launched to target key population, including i) school pupils (building on project LDCF 2); ii) regional authorities and prefecture; iii) local and national NGOs and associations; and iv) donor agencies (possibly financing regional development planning). The campaigns will put forward the environmental and socio-economic benefits of green and grey technologies for adaptation. Fact sheet on lessons learned and best practices will be compiled under Output 3.2.4. They will highlight the benefits generated by the adaptation interventions implemented in Gobaad Plain and Tadjourah Ville ? Components 1 and 2 ? with a view to inform policy and development processes. These fact sheets will be disseminated to line ministries, donor agencies, and local associations to communicate about the project?s achievements.

- At the national level, more generally key results of knowledge products will be disseminated via radio, TV and events (world environment day). Moreover, the project will organize one large-scale national sensitization workshop targeting technical staff members of ministries and Regional Councils in Djibouti. Communication will also be supported by the project webpage, hosted by the MEDD, as well as UNEP and GAN, who will support the development of targeted articles on EbA in Djibouti.

The main project knowledge products are summarised in Table 10. Note that all project-related communication products and awareness raising activities will make use of gender-sensitive communication products and channels, as underlined in the GAP. This will be supported by the national and international gender experts, hired by the projects.

The proposed project is designed based on lessons learned and best practices from projects previously developed and implemented in the country. The PMU of the proposed project will work under the MEDD, which manages and oversees directly or indirectly EbA-related projects implemented in the country. Collaboration with other key government agencies ? like MAEPE ? and donors will be sought to facilitate information exchange and ensure synergies and complementarities between projects.

Table 10: Project knowledge products and Management plan

Key Knowledge Products	***Timeline***	***Responsibility (staff or co-finance initiative)***

Project Component 1	? Report with detailed assessment of Gobaad wadi, including climate change impacts on ecosystem and flood risks ? EbA protocols for climate-resilient reforestation ? Market analysis to inform agro-pastoral production and sale techniques for target cooperatives	Wadi assessment report: Y1 EbA protocol: Y2 Market analysis: Y3 Budget: USD 123,000 over 3 years	Int. Experts in charge of the detailed wadi analysis and market analysis to produce reports; Project Officer to ensure report publication on MEDD website EbA expert and CTA to monitor reforestation progress
Project Component 2	? Report with detailed assessment of Gobaad wadi, including climate change impacts on ecosystem and flood risks ? EbA protocols for climate-resilient reforestation ? Impacts and market analysis for use of prosopis charcoal	Wadi assessment report: Y1 EbA protocol: Y2 Budget: USD 140,000 over 2 years	Int. Experts in charge of the detailed wadi analysis and market analysis to produce reports ; Project Officer to ensure report publication on MEDD website EbA expert and CTA to monitor reforestation progress and independent consultants to conduct household surveys on wood extraction (to assess impacts of prosopis charcoal promotion)

Project Component 3	? Multi-sectoral climate change maps and vulnerability assessments for Dikhil and Tadjourah regions ? Ecosystem valuation analysis including cost-benefits study of green vs. grey infrastructure ? Lessons learned fact sheets ? Regional adaptation plans for Dikhil and Tadjourah ? Report with recommendations on pathway to access climate finance in Djibouti to support the implementation of regional adaptation plans	CC maps and VA: Y2 Ecosystem valuation analysis: Y1 Lessons learned fact sheets: Y2-6 Adaptation plans: Y3 Recommendation for accessing climate finance: Y3 Budget: 283,500 USD over 6 years	Int. Experts in charge of the climate risk maps, VA, ecosystem valuation study, regional adaptation plans; Project Officer to ensure reports publication on MEDD website Project GAN to further support the dissemination of these knowledge products Project Officer to collect lessons learned on a regular basis and prepare fact sheets. MEDD staff members to diffuse knowledge products and lessons learned during international events. Projects PGIRE to compile lessons learned and best practices for adaptation in watershed landscapes.

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

9. Monitoring and Evaluation

Describe the budgeted M and E plan

The project will follow UNEP standard monitoring, reporting and evaluation processes and procedures. Reporting requirements and templates are an integral part of the UNEP legal instrument to be signed by the executing agency and UNEP.

The project Monitoring and Evaluation (M&E) Plan, described in Section 6 of the Prodoc, is consistent with the GEF Monitoring and Evaluation policy. The Project Results Framework presented in Appendix 3

of the prodoc includes SMART indicators for each expected outcome and end-of-project targets. These indicators along with the key deliverables and benchmarks included in Appendix 3 will be the main tools for assessing project implementation progress and whether project results are being achieved. The means of verification and the costs associated with obtaining the information to track the indicators are summarized in Appendix 6 of the prodoc. Other M&E related costs are also presented in the Costed M&E Plan and are fully integrated in the overall project budget.

The project M&E process is key to ensure smooth project implementation and goal achievements. Therefore, the CTA will be in charge of the project?s M&E process, in particular implementation of the M&E plan, ESIA, GAP and ESMF. He/she will work closely with the project Officer, and other staff members of the PMU; as well as the independent M&E consultant, whose work will be supported by an international expert. Continuous project M&E from these experts, along with the baseline and mid-term evaluations will be used to revise the project strategy, including its activities, and result framework. Such adjustments will also be based on field observations, consultation with the project beneficiaries (communities and local authorities), as well as on the knowledge products developed through the project. For example, the climate change risk maps could inform the design and implementation of grey and green EbA activities that have not been implemented yet. Assumptions and safeguards will also be carefully monitored through the annual PIR process.

The M&E plan will be reviewed and revised as necessary during the project inception and implementation phases to ensure project stakeholders understand their roles and responsibilities vis-?-vis project monitoring and evaluation. Indicators and their means of verification may also be fine-tuned at the inception workshop or on the basis of the baseline study or mid-term review. The project baseline study, to be undertaken in the project inception phase, will establish the data gathering approach and workplan for monitoring adaptation progress as measured by the project indicators. It will also further develop the M&E plan into a detailed project M&E framework.

Day-to-day project monitoring is the responsibility of the project management team but other project partners will have responsibilities to collect specific information to track the indicators. It is the responsibility of the Project Manager to inform UNEP of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely fashion.

The project manager will be responsible for providing written quarterly updates to UNEP and the project steering committee. Quarterly reports will include:

? Overall progress made towards the project?s goals, and specific progress made towards achieving the targets in the M&E framework;

? Project outputs and deliverables;

? Lessons learned (positive and negative) and emerging best practices;

? Risk and adaptive management; and

? Results of any consultations with development partners or other stakeholder to provide additional support for the project.

Project supervision will take an adaptive management approach. The Task Manager will develop a project supervision plan at the inception of the project which will be communicated to the project partners during the inception workshop. Project risks and assumptions will be regularly monitored both by project partners and UNEP. Risk assessment and rating is an integral part of the annual Project Implementation Review (PIR) process. The quality of project monitoring and evaluation will also be reviewed and rated as part of the PIR. Key financial parameters will be monitored quarterly to ensure cost-effective use of financial resources.

Mid-Term Review

A mid-term management review will take place on Y4 as indicated in the project milestones. The review will include all parameters recommended by the GEF Evaluation Office for terminal evaluations and will verify information gathered through the GEF tracking tools, as relevant. The review will be carried out using a participatory approach whereby parties that may benefit or be affected by the project will be consulted. Such parties were identified during the stakeholder analysis (see section 5 of prodoc). The project Steering Committee will participate in the mid-term review and develop a management response to the evaluation recommendations along with an implementation plan. It is the responsibility of the UNEP Task Manager to monitor whether the agreed recommendations are being implemented.

Terminal Evaluation

In line with the GEF Evaluation requirements and UNEP?s Evaluation Policy, GEF Full-Sized Projects and any project with a duration of 4 years or more will be subject to an independent Mid-Term Evaluation or management-led Mid-Term Review at mid-point. All GEF funded projects are subject to a performance assessment when they reach operational completion. This performance assessment will be either an independent Terminal Evaluation or a management-led Terminal Review.

In case a Review is required, the UNEP Evaluation Office will provide tools, templates, and guidelines to support the Review consultant. For all Terminal Reviews, the UNEP Evaluation Office will perform a quality assessment of the Terminal Review report and validate the Review?s performance ratings. This quality assessment will be attached as an Annex to the Terminal Review report, validated performance ratings will be captured in the main report.

However, if an independent Terminal Evaluation (TE) of the project is required, the Evaluation Office will be responsible for the entire evaluation process and will liaise with the Task Manager and the project implementing partners at key points during the evaluation. The TE will provide an independent assessment of project performance (in terms of relevance, effectiveness and efficiency), and determine the likelihood of impact and sustainability. It will have two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote learning, feedback, and knowledge sharing through results and lessons learned among UNEP staff and implementing partners. The direct costs of the evaluation (or the management-led review) will be charged against the project evaluation budget. The TE will typically be initiated after the project?s operational completion If a follow-on phase of the project is envisaged, the timing of the evaluation will be discussed with the Evaluation Office in relation to the submission of the follow-on proposal.

The draft TE report will be sent by the Evaluation Office to project stakeholders for comment. Formal comments on the report will be shared by the Evaluation Office in an open and transparent manner. The project performance will be assessed against standard evaluation criteria using a six-point rating scheme. The final determination of project ratings will be made by the Evaluation Office when the report is finalized. The evaluation report will be publicly disclosed and will be followed by a recommendation compliance process. The evaluation recommendations will be entered into a Recommendations Implementation Plan template by the Evaluation Office. Formal submission of the completed Recommendations Implementation Plan by the Project Manager is required within one month of its delivery to the project team. The Evaluation Office will monitor compliance with this plan every six months for a total period of 12 months from the finalisation of the Recommendations Implementation Plan.

The compliance performance against the recommendations is then reported to senior management on a six-monthly basis and to member States in the Biennial Evaluation Synthesis Report. Table 11 presents the project?s M&E plan.

Table 11: M&E plan

Type of M&E activity	**Responsible Parties**	**Budget US$ (Excluding project team staff time)**	**Time frame**
Inception workshop and report	PM CTA Project Officer UNEP TM	Indicative cost: US$ 5,000	Within the first two months of project start up. Will be undertaken at the national and sub-national scales.
Baseline study	PM Independent consultants UNEP TM	Indicative cost: US$ 30,000	At project inception.
PIR-annual progress reporting	PM CTA UNEP TM UNEP FMO	None	Annually
MTR/MTE	UNEP TM/UNEP Evaluation Office	Indicative cost: US$ 40,000	At the mid-point of project implementation.
Terminal Evaluation (TE)	UNEP Evaluation Office	Indicative cost: US$ 55,000	At least three months before the end of project implementation.
Field and household surveys to measure project progress against baseline	Independent consultants	Close monitoring of indicators and progress towards achieving targets at project?s mid- and end-term Indicative cost: US$ 40,000	At the mid-point of project implementation. At least three months before the end of project implementation.

Type of M&E activity	Responsible Parties	Budget US$ (Excluding project team staff time)	Time frame
TOTAL ACTIVITY COST		**USD 170,000**	
M&E CONSULTANTS			
International M&E specialist		US$78,000	20 work days per year with 5 days/yr in Djibouti + training of MEDD on M&E techniques for an extra 20 days in-country
National M&E Consultant		US$120,000	40 work days per year
TOTAL CONSULTANT COST		**USD 198,000**	
TOTAL M&E COSTS		**USD368,000**	

10. Benefits

Describe the socioeconomic benefits to be delivered by the project at the national and local levels, as appropriate. How do these benefits translate in supporting the achievement of global environment benefits (GEF Trust Fund) or adaptation benefits (LDCF/SCCF)?

The project?s adaptation benefits are detailed under section 6) of the project?s justification (Part II). The proposed interventions will increase the climate-change resilience of 104,977 in Dikhil and 102,329 people in Tadjourah, so a total of 207,306 beneficiaries. The project will directly benefit 20% of the country?s population.

At the local level, under Component 1 & 2, the project will generate socio-economic benefits for the rural communities in As Eyla and Hanle, and urban and peri-urban communities of Tadjourah. Agricultural techniques will be improved, and equipment provided to increase agricultural productivity on Gobaad, Hanle, and the periphery of Tadjourah. Incomes are expected to increase as productivity arises, marketing and commercialization of key commodities will be boosted by strengthening existing cooperatives in Dikhil and Hanle; and establishing new cooperatives in Tadjourah. Moreover, existing cooperatives will be strengthened, equipped, and capacitated to process, store, and commercialise their commodities on the domestic and international markets. To create new economic opportunities, the project will develop income-generating activities, that are resilient to climate change impacts. These activities will especially target women, whose climate change vulnerability is rising (see Appendix 13 of Prodoc ? Gender Assessment). In return, as income streams are increased and livelihood improved, farmers will not need to turn to survival strategies which deteriorate the environment, like wood extraction for the production of charcoal and fodder. To ensure the protection of local ecosystems, the project will support sustainable

charcoal production using *prosopis sp*.; and fodder production within agro-pastoral plots and in community-managed fodder gardens (in Tadjourah-Ville). These interventions will not only tackle key drivers of deforestation in Dikhil and Tadjourah, which worsen vulnerability to climate change, but also generate a new source of income for the vulnerable communities in the target sites. They will also be sensitized on the roles and benefits of healthy, restored ecosystems to support agricultural productivity, buffer against climate change hazards and build adaptive capacity, under Component 3 of the project, and through demonstration of restoration impacts under Component 1&2

Finally, under Component 3, the socio-economic and environmental benefits of restored wadi ecosystems will be demonstrated to the local communities, as well as government agencies, line ministries, organizations in the public and private sector and donors. This will be supported through monitoring of project?s impacts, an ecosystem valuation study, and publication of data and knowledge products on the MEDD website. Moreover, through demonstration, equipment and technical support provided to the beneficiaries, the project will ensure the population continues to protect and preserve their ecosystems. Ecosystem protection will finally be further institutionalized under Components 3 as regional capacity for environmental management and adaptation planning will be enhanced.

Table 8: Project direct beneficiaries

Total number of direct beneficiaries	*On-site beneficiaries*	*Governmental beneficiaries*
DIKHIL		**NATIONAL**
Regional level knowledge product and adaptation planning: 104,977 people including 49,339 women (*based on average of 47% women in population*)	As Eyla climate-resilient agriculture: 136 community members, including 26 women (household) trained ? that is 707 people directly benefiting from climate-resilient agriculture (*based on average of 5,2 people per household*).	20 staff members from MEDD, including 10 women
	As Eyla alternative activities: 118 women (*3 to become agricultural technicians; 35 on poultry raising; 50 on handcraft; 25 on charcoal production; 5 members of Gobaad cooperative*) and 37 men (7 to become agricultural technicians, 25 on charcoal production, 5 members of Gobaad cooperative) ? that is 802 people directly benefiting from climate-resilient economic activities (*based on average of 5,2 people per household*).	2 staff members per Regional Councils (10 in total including 5 women)

	Hanle climate-resilient agriculture: 75 community members, including 33 women (household) trained ? that is 390 people directly benefiting from climate-resilient agriculture (*based on average of 5,2 people per household*). Alternative activities: 6 women (1 *to become agricultural technicians; 5 members of Lylia Bouri and Koudi koma cooperative*) and 6 men (1 to become agricultural technicians, 5 members *of Lylia Bouri and Koudi koma cooperatives*) ? that is 62 people directly benefiting from climate-resilient economic activities (*based on average of 5,2 people per household*).	
TADJOURAH		**NATIONAL**
Regional-level knowledge product and regional adaptation planning: 102,329 including 48,094 women (*based on average of 47% women in population*)	Tadjourah-Ville flood protection: 20,000 people incl. 9,400 women (based on average of 47% women in population)	
	Tadjourah-Ville alternative activities: 204 women (including 4 *to become agricultural technicians, 50 on charcoal production, 50 on fodder production, 150 on handcraft)* and 106 men (including *6 to become agricultural technicians, 50 on charcoal production, 50 on fodder production)* ? that is 310 people directly benefiting from climate-resilient economic activities (*based on average of 5,2 people per household*).	
	Climate-resilient agriculture: 96 community members, including 35 women (household) trained ? that is 500 people benefiting from climate-resilient agriculture (*based on average of 5,2 people per household*).	
GRAND TOTAL		
207,306 incl. 97,433 women (*based on average of 47% women in population*)	22,771 incl. 10,702 women based on average of 47% women in population[1]	30 incl. 15 women

[1] Note that these 22,771 project beneficiaries are already included in the total of left column ? regional population.

11. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification*

PIF	CEO Endorsement/Approval	MTR	TE
	Medium/Moderate		

Measures to address identified risks and impacts

Elaborate on the types and risk classifications/ratings of any identified environmental and social risks and impacts (considering the GEF ESS Minimum Standards) and any measures undertaken as well as planned management measures to address these risks during implementation.

Appendix 12 of Project Document: Environmental and Social Magement Plan.

Table 18: Environmental and Social Management Plan

UNEP Safeguard Standard	Summary of risks	Concerned activities Avoidance, minimization, and mitigation	Risk significance[1]	Responsible party/person	Schedule

UNEP Safeguard Standard	Summary of risks	Concerned activities Avoidance, minimization, and mitigation	Risk significance[1]	Responsible party/person	Schedule
Human Rights	? *Potential conflicts arise on land use and management* ? *Risks of exclusion from the decision-making process of any or potentially may affected stakeholders, in particular vulnerable and marginalized groups,* ? *Risks of significant concerns or disputes raised during the stakeholder engagement process,* ? *Risks that rights-holders do not have the capacity to claim their rights and that duty-bearers do not have the capacity to meet their obligations* ? *lack of sufficient political will to facilitate the required levels of transparency and accountability in project management* ? *Inequitable or discriminatory negative impacts on the quality of and access to resources or basic*	? The development of EbA protocols for wadi reforestation, and selection of protected areas in the Gobaad plain and the target urban wadis in Tadjourah city will be done in a participatory way including community management groups and stakeholder consultations. ? Selection of the community beneficiaries for project interventions including agriculture and other income generating activities will be based on a transparent eligibility criteria including interest and availability through consultations with communities, local leaders and authorities ? The baseline assessment will analyse the context in which the project will be implemented to make sure that interventions will not cause a conflict or escalate existing tensions. Some recommendations will be made if necessary to adopt a conflict-sensitive approach in implementation, monitoring and evaluation of interventions. ? Ensuring transparency of the procurement process including those of community contracting.	Moderate	MEDD Local authorities Guidance from International EbA expert (for reforestation-related activities) Supervision by the project MOfficer supported by National & International M&E Expert UNEP for support and oversight	Across implementation of Activities 1.2.1, 1.2.2, 1.3.2, 1.3.4, 1.4.4 and 2.2.1, 2.2.2, 2.2.3, 2.4.4

UNEP Safeguard Standard	Summary of risks	Concerned activities Avoidance, minimization, and mitigation	Risk significance[1]	Responsible party/person	Schedule
Gender Equality and Women?s Empowerment	? *Risks that project likely have inequitable negative impacts on gender equality and/or the situation of women and girls,* ? *Potentially discriminate against women or other groups based on gender, especially regarding participation in the design and implementation or access to opportunities and benefits,* ? *Risks that 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.* ? *Risk that the virus outbreak and/or response regulations would increase gender inequality in access to project resources and benefits*	? Include women in the steering committee of project activities, ? Include gender equality (if possible) in the selection criteria of the activities? beneficiaries. ? Implement the Gender Action Plan to ensure full participation of women throughout project implementation ? Promote activities that improve the participation and decision-making of women in the governance of natural resources, those likely to be led by women and / or aimed at directly benefiting them ? Strengthen the capacities of women farmers and provide specific opportunities for alternative economic activities to womenInclude women in decision making regarding redesign of project activities and in all activities in response to COVID-19 ? Address possible inequal project benefits to women and men ?	Low	MEDD Local authorities Supervision by the national and international gender experts UNEP for support and oversight	Throughout the project implementation process.

UNEP Safeguard Standard	Summary of risks	Concerned activities Avoidance, minimization, and mitigation	Risk significance[1]	Responsible party/person	Schedule
SS 1: Biodiversity Conservation and Natural Resources Management	? *Introduction or utilization of any invasive alien species of flora and fauna, whether accidental or intentional,* ? *Introduction of non-native species that may become invasive, thereby negatively impacting biodiversity and ecosystem services,* ? *Erosion and sedimentation as a result of invasive alien plant clearing, planting of indigenous plant species or removal of small human-made in wadi banks.* ? *Risk of soil/water contamination from discarded PPE and use of disinfectants in project areas.*	? A detailed EbA protocol will be developed by international experts in Year 1 of the project. Selection criteria will include preference for native species, and where their use is genuinely not feasible, strict requirements that non-native species used are not invasive. Potential of species to become invasive will be considered and will include ecological risk assessment based on species traits, propagule pressure and invasion status internationally, etc. The need for fast growing and highly productive species, to help meet for the loss of wood due to cutting in order to reduce pressure on the limited vegetation available, will be balanced carefully against medium and long-term risk of introduced species becoming invasive and subsequent negative consequences for ecosystem services. The EbA expert will follow up reforestation progress and impacts every year, and the interventions will be adjusted if needed. ? The project will restore traditional acacia woodlands especially along the wadis and agricultural gardens. This will serve to	Moderate	MEDD Ministry of Agriculture Local authorities International EbA Expert International CCA expert	Across implementation of Activities 1.3.2, 1.3.4, and 2.2.2 and 2.2.3

UNEP Safeguard Standard	Summary of risks	Concerned activities Avoidance, minimization, and mitigation	Risk significance[1]	Responsible party/person	Schedule
Safeguard Standard 2: Climate Change and Disaster Risks	? *Outputs and outcomes sensitive or vulnerable to potential impacts of climate change (e.g. changes in precipitation, temperature, extreme events)* ? *Risk of increase impacts from the pandemic on vulnerability of urban and rural communities to climate hazards in project areas*	? Project activities are likely to reduce the atmospheric concentration of greenhouse gases in project sites. The use of solar powered pumps to replace diesel ones will contribute to reduction in greenhouse gas emissions so will replantation of trees that will absorb carbon dioxide. ? The multiple tree species will be planted, over at least 100-150 ha of degraded wadis banks to protect agricultural gardens in As eyla, over 20 ha in Hanle, and over at least 50 ha of degraded bank in Tadjourah-Ville. ? The use of Prosopis and/or other species as appropriate as alternative source of energy promoted to reduce human pressure and degradation of natural woodland. ? An international climate change expert will supervise and review the design of all green and grey interventions and agriculture to ensure they include climate change related risks. ? A national engineer will ensure all infrastructure are robust enough to withstand climate-related hazards.	Moderate	MEDD Local authorities International climate change expert National Engineer	Across Implementation of 1.3.1, 1.5.2, 2.2.2 and 2.3.2.

UNEP Safeguard Standard	Summary of risks	Concerned activities Avoidance, minimization, and mitigation	Risk significance[1]	Responsible party/person	Schedule
Safeguard Standard 3: Pollution Prevention and Resource Efficiency	? *Release of pollutants to the environment and generate of waste (solar system waste)* ? *Land and water pollution* ? *Significant consumption of energy, water, or other material inputs could be mitigated by these measures.*	? UNEP's safeguards standards as well as International best practices and national laws will be followed to avoid, limit and manage possible pollution from small-scale construction activities. Contractors will be required to adhere to these laws and measures, and this will be included as one of the criteria in the biding process ? Project activities are likely to reduce the atmospheric concentration of greenhouse gases in project sites. The use of solar powered pumps to replace diesel ones will contribute to reduction in greenhouse gas emissions so will replantation of trees that will absorb carbon dioxide. ? The promotion of alternative economic activities based on waste recycling will lead to cleaning of solid waste from wadi beds and drainage systems ? Sediment pollution of waterways will be avoided and minimised by following best practices in terms of drainage control, sediment and erosion controls and stockpiling of soil and other materials. This will include appropriate designs, the scheduling	Moderate	Contractors supervised by MEDD. Supervision by the project officer	Across implementation of Activities 1.1.7 and 2.1.3

UNEP Safeguard Standard	Summary of risks	Concerned activities Avoidance, minimization, and mitigation	Risk significance[1]	Responsible party/person	Schedule
Safeguard Standard 4: Community health, Safety and Security	*Safety issues during construction and restoration work, particularly during heavy rainfall events*	? Works during heavy rainfall or high temperatures events will be avoided. Safety procedures will be built into terms of references of contractors. The project engineer will conduct spot checks to monitor compliance. ? Dust pollution will be avoided and minimised by following standard dust management measures including consideration of climatic events, using water for dust suppression activities while complying with any water restrictions, restricting speeds on access roads, covering truck loads and locating material stockpile areas as far as practicable from sensitive rece`ptors. ? Noise emissions during construction will be limited by following standard good practices, including selection of appropriate machinery, installation of appropriate noise reduction devices on machinery and requiring that contractors train their employees.	Low	Contractors and subcontractors supervised by MEDD	Throughout the restoration and construction works.

UNEP Safeguard Standard	Summary of risks	Concerned activities Avoidance, minimization, and mitigation	Risk significance[1]	Responsible party/person	Schedule
	Risks that Community members are not aware of residual risks from flooding, after urban EbA measures are implemented and are not aware of the complementary roles of urban EbA and structural measures.	? National and sub-national awareness-raising campaigns on adaptation to climate change in rural and urban areas of Djibouti will be used as opportunities to promote awareness on the benefits and limitations of urban EbA vis-?-vis flood risks, structural measures, and residual risks.	Low	MEDD UNEP	Throughout implementation of activities of the component 3

UNEP Safeguard Standard	Summary of risks	Concerned activities Avoidance, minimization, and mitigation	Risk significance[1]	Responsible party/person	Schedule
Safeguard Standard 6: Displacement and Involuntary Resettlement.	*Partial physical displacement or relocation of people* *Introduction of new restrictions about cutting trees or settling in some areas* *Risk of forced evictions*	? The project will not force displacement of communities or people; all relocations (if happening) will be voluntary. ? The project should limit economic displacement by providing resilient and diversified sources of livelihoods and incomes to target communities ? Some work will be done with the city of Tadjourah to forbid certain areas to new settlements especially within the wadi beds, some new areas protected from climate change impacts might be identified for new settlement which will modify/influence future urban development. ? Some alternative options will be introduced to sustain existing livelihoods such as charcoal / firewood and fodder production through sustainable practices, craft making, agriculture in Tadjourah?s outskirt, and identification of new areas for settlements protected from climate change impacts (if possible) through urban planning ? The project will work to ensure that human rights are actively protected by local authorities and rights and claims of these	Moderate	Prefectures MEDD UNEP	Throughout the rehabilitation, protection and conservation of key wadi ecosystems works

UNEP Safeguard Standard	Summary of risks	Concerned activities Avoidance, minimization, and mitigation	Risk significance[1]	Responsible party/person	Schedule
Safeguard Standard 8: Labour and working conditions	*Risk that working conditions that do not meet national labour laws or international commitments* *Risk that project-supported workers would increase their risk of virus exposure (e.g. project labour camps, construction sites, worker housing)* *Risk of use and disposal of potentially contaminated PPE or other health care waste*	? Project stall will be contracted by the Ministry of Environment. Selection will be done in collaboration with UNEP. Contract workers will be hired within the Project Management Unit to carry out the Project activities. ? Clear and easy-to-understand information and documentation will be provided to project workers on their conditions of employment. This information and documentation will describe workers' rights under national labour laws (including applicable collective agreements), including rights to working time, wages, overtime, remuneration and benefits, and any other rights mentioned in this standard safeguard. This documentation and information shall be made available at the beginning of the employment relationship and in the event of any significant change in the terms and conditions of employment. ? In addition, consultants will be recruited by the ministry, sometimes by UNEP upon ministry?s request ? Review project activities that engage workers and conduct	Low	Contractors and subcontractors supervised by MEDD MEDD UNEP	Throughout the restoration and construction works

[1] Refer to UNEP Safeguard Risk Identification Form (SRIF):): Implementation Guidance Note to assign values to the Impact of Risk and the Probability of Risk to determine the overall significance of Risk (Low, Moderate or High).

Low risk: Negative impacts minimal or negligible: no further study or impact management required.

Moderate risk: Potential negative impacts, but limited in scale, not unprecedented or irreversible and generally limited to programme/project area; impacts amenable to management using standard mitigation measures; limited environmental or social analysis may be required to develop a Environmental and Social Management Plan (ESMP). Straightforward application of good practice may be sufficient without additional study.

High risk: Potential for significant negative impacts (e.g. irreversible, unprecedented, cumulative, significant stakeholder concerns); Environmental and Social Impact Assessment (ESIA) (or Strategic Environmental and Social Assessment (SESA) including a full impact assessment may be required, followed by an effective comprehensive safeguard management plan.

Supporting Documents

Upload available ESS supporting documents.

Title	Module	Submitted
Environmental and Social Impact Assessment and Management Plan	**CEO Endorsement ESS**	

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

Results Framework

	Upper Level Indicators	**Baseline**	**Mid-term Target**	**End of Project Target**	**Means of Verification**[1]
Project Objective **To increase the capacity of local communities and authorities in Dikhil and Tadjourah regions to adapt to climate change**	1.# of people (disaggregated by gender) with increased climate change resilience.	0	8,000 (at least 50% women)	21,841 (at least 50% women)	Field surveys in the project target areas Terminal evaluation
	2. # of government staff with increased knowledge on EbA planning and implementation	0	n/a	56 government staff members with increased knowledge through training (scale to be determined in the baseline study).	Surveys at baseline, mid-term and end of project Participant lists of trainings and relevant workshops
Outcome	**Outcome Indicator**	**Baseline**	**Mid-term Target**	**End of Project Target**	**Means of verification**

OUTCOME 1. Increased resilience of local communities and ecosystems in Dikhil to the effects of climate change, particularly more frequent and severe droughts and floods.	1.1. # of gardens in As Eyla with improved water access, and protected against floods.	0	60 gardens rehabilitated 100 gardens protected against floods	60 gardens rehabilitated 138 gardens protected against floods	Field missions Evaluation report
	1.2. # of ha of wadi reforested	0	60 ha	120 ha	Field survey GIS maps
	1.3 # of people with climate-resilient livelihoods (% of female-headed households)	To be defined during the baseline assessment	120 people (in Gobaad and Hanle) have climate-resilient livelihoods, including agriculture, craft-making, poultry raising and sustainable coal making (at least 50% women)	298 people in Gobaad and Hanle) have climate-resilient livelihoods, including agriculture, craft-making, poultry raising and sustainable coal making (at least 50% women)	Evaluation report/surveys of participants Participation list at training sessions
	1.4 # of people with access to sustainable fodder and fuel wood (disaggregated by gender)	Fodder to be defined during the baseline assessment Prosopis = 0	At least 100 people have access to charcoal made from *prosopis* and/or fodder (at least 50% women)	At least 300 people have access to charcoal made from *prosopis* and/or fodder (at least 50% women)	Evaluation report/surveys of participants Participation list at training sessions
Outcome 2 Increased resilience of local communities and ecosystems in Tadjourah	2.1. # of people less exposed to flood risks	0	n/a	At least 6,000 households less exposed to floods	Field surveys Review of the weirs and dykes

region to the effects of climate change, particularly more frequent and severe floods	2.2. # of ha of wadi reforested	0	20 ha	50 ha	Field survey GIS maps
	2.3 # of people with climate-resilient livelihoods (disaggregated by gender)	To be defined during the baseline assessment	150 people have climate-resilient livelihoods, including agriculture, craft-making, and sustainable coal making (at least 50% women)	At least 346 people have climate-resilient livelihoods, including agriculture, craft-making, and sustainable coal making (at least 50% women)	Evaluation report/surveys of participants Participation list at training sessions
	2.4 # of people with access to sustainable fodder and fuel wood (disaggregated by gender)	Fodder to be defined during the baseline assessment Prosopis = 0	At least 200 people have access to charcoal made from *prosopis* and/or fodder from community-gardens (at least 50% women)	At least 500 people have access to charcoal made from *prosopis* and/or fodder from community-gardens (at least 50% women)	Evaluation report/surveys of participants Participation list at training sessions

OUTCOME 3. Evidence-based knowledge, and awareness of EbA benefits to inform policies and practices and upscale adaptation at local, regional and national levels.	3.1 # of knowledge products developed on EbA benefits and shared to inform decision-making and policy-planning.	2 Updated climate change projections for Djibouti Climate Vulnerability Analysis on water and agriculture in Tadjourah and Dikhil	n/a	5 2 regional multi-sectoral vulnerability analyses for Dikhil and Tadjourah 1 Cost-benefit analysis of green and grey adaptation interventions Fact sheet and lessons learned for ecosystem restoration produced and shared on MEDD website	Final Reports Participation list and minutes of workshop sharing events / trainings
	3.2 # of local adaptation plans produced	0	n/a	2 local adaptation plans produced for the regions of Dikhil and Tadjourah	Project activity reports Review of the adaptation plans

	3.3 # of governmental staff members trained - on M&E for EbA interventions - on environmental management and climate change	0	- 2 staff members of Dikhil RC and 2 staff members of Tadjourah RC train on environmental management and climate change	- 5 staff members of MEDD trained on M&E process -- 2 staff members of Dikhil RC and 2 staff members of Tadjourah RC trained on environmental management and climate change - At least 2 staff member of each RC of Djibouti trained on mainstreaming adaptation into local planning	Capacity assessment (score cards) Review of training modules and participation list

[1] These will be updated based on baseline study findings (Output 3.1).

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

STAP comments

STAP recommends the project elaborate a clear theory of change that transparently links the well-documented stressors in the problem statement to the proposed interventions and the expected outputs and outcomes so that these assumptions might be monitored and evaluated during project implementation, and project activities adaptively managed to maximize benefits.	The theory of change was improved and complemented with problem trees (see Figures 10 and 11 in prodoc, p.24) for the two project sites ? which clearly identify climate and non-climate (anthropic) drivers of vulnerability, socio-economic root causes, first order impacts on ecosystems and second order socio-economic impacts on livelihoods. The problem trees outline for each region the chain of impacts (causal relationships) for the identified problems. In addition, ?solution trees? (Figures 23 and 24 of the prodoc, p.44) were prepared for both project areas to link the project?s preferred solutions with impacts on socio-economic conditions, ecosystems and livelihoods. Table 7 p49 of prodoc puts in relation each identified problem with its drivers and the solutions proposed by the project to address it. The Theory of Change (ToC), presented in a diagram p73 (Figure 26) of Prodoc, captures the causal pathways highlighted in the problem trees, the solutions proposed in the solution trees as well as the barrier analysis and the assumptions. It shows the link between specific outputs, ambitious but realistic outcomes and impacts to achieve the project final objective. Causal pathway of the proposed interventions is described in detail in a specific section p75 of Prodoc

The project does not consider alternative framings of the baseline scenario where pressures might increase or decrease, or where the relative importance of pressures might change. STAP suggests the project consider plausible scenarios where such changes might impact the assumptions in the theory of change, and address how the project might shift emphasis or interventions to address those new scenarios.	The intervention design was the results of an extensive stakeholder engagement process. We would refer STAP to Section 5 and Appendix 13 of the project document for a record of the stakeholder consultations. Output 3.1 is focused on generating climate risk and vulnerability assessments focused on the Dikhil and Tadjourah ecosystems, which will consider scenarios related to climate change and development trajectories. The ToC will be adjusted accordingly. In addition, section 6 (M&E plan) of the Prodoc describes how the project?s context will be continuously reviewed to adapt the project strategy and its result framework.

The indicators to capture adaptation benefits are quite general and may not capture the benefits of the project. For example, area under climate-resilient management is an interesting indicator, but it is not clear how this area relates to the reduction in vulnerability to drought or flood that is the goal of the project. STAP suggests that the project more clearly articulate how this indicator relates to reduced flood or drought vulnerability, or establish intermediate indicators linking land under climate-resilient management to these desired outcomes.	There is scant information in Djibouti on impacts of climate change and measures that lead to reduced vulnerability. One of the aims of this project is to generate such data. The baseline study will establish the data gathering approach and workplan for monitoring adaptation progress as measured by the project indicators. Through a continuous monitoring approach, the project will develop an understanding of the causal linkages between project activities (measured by indicators) and reduced vulnerability to climate change. For better understanding of the adaptation benefits of the proposed intervention strategy, the project will carry out economic valuation of the project benefits/costs such as enhanced freshwater provisioning or improved local air quality, socio-economic benefits as well as those that are global public goods such as climate change mitigation and enhanced species and habitat biodiversity. Output 3.2 will also build capacity for rigorous M&E within the MEDD through training supported by national and international M&E experts; in addition to UNEP oversight. Moreover, the project?s CTA will ensure careful monitoring, collection of lessons learned and best practices for all current and future EbA-related projects implemented in Djibouti.

The project is aimed at a range of activities that would likely be resilient to climate change. However, it does not consider multiple climate scenarios in its scenarios, and therefore cannot evaluate that resilience to potential changes. Such consideration allows for the selection and/or prioritization of indicators for the monitoring of project outputs and outcomes and the facilitation of effective adaptive management. STAP recommends considering a range of climate scenarios and not just the most likely, and the ways in which proposed interventions might gain or lose efficacy under those scenarios.	Thank you, all available information on climate change scenario for Djibouti, and in particular the project sites, have been included in the ?climate drivers of vulnerability? section (p.27 of Prodoc). Output 3.1 is focused on generating climate risk and vulnerability assessments focused on the Dikhil and Tadjourah ecosystems, which will consider scenarios related to climate change and development trajectories. Moreover, section 3.1 of the Prodoc (on ToC) highlights how climate change will be integrated into project interventions and section 6 (M&E plan) indicates how the project strategy will be reviewed based on field consultations and new knowledge of climate change impacts (among other factors). The project team will include an international climate change expert to support these processes.

The PIF identifies relevant government stakeholders, but generally does not discuss local stakeholders beyond reference to ?communities.? These communities are diverse, as the reference to women?s cooperatives and small businesses in Gobaad suggests, but this diversity is not captured in the PIF. While the project will include participatory planning processes that should bring forth a diversity of stakeholders, STAP suggests that the project consider how those diverse stakeholders will be identified and empowered to participate, particularly women.	A detailed Stakeholder engagement plan can be found in Section 5 of the project document (see p129). This section explains how stakeholders were engaged and consulted during the PPG phase. It also conducts a stakeholder analysis and mapping based on the level interest of and influence over the project of each group of stakeholder and finally elaborates a plan for continued engagement of all relevant stakeholders during the project implementation phase. The section identifies farming communities, city dwellers, local chiefs, and local associations, as well as pathways to engage them in the project. Particular focus is given to women?s engagement; some activities are designed for them based on the result of the field mission and the project will include a national and a international gender experts to mainstream gender issues in all activities. A comprehensive Gender Analysis was conducted, and a Gender Action Plan developed and can be found in Annex 13 of the Prodoc p255

There are some references to gendered needs, activities, and opportunities in the PIF, but they are not clearly tied to gendered risks. The PIF states that a gender gap analysis will take place at the project preparation grant stage. While the PIF strongly suggests that gender-differentiated risks and opportunities will be identified and addressed through the participatory planning and implementation phases of the project, the fact that very little is said about gender in the narrative description of activities and project phases suggests the need for a more serious weaving of gender considerations into project activities. STAP suggests that at the PPG phase the project consider how gendered risks and opportunities might compromise or enhance their efforts at each stage of the project, and include a discussion of how risks will be mitigated and opportunities leveraged in their theory of change. There is no statement of how the project might contribute to	Gender sensitive and responsive approach of the project has been greatly improved during the PPG phase. The Prodoc integrates a gender analysis and a costed gender action plan (GAP) in Appendix 13 (see p255) to inform inclusivity and gender equity in project activities. The gender assessment provides an overview of progresses and remaining gaps with regards to gender equality in Djibouti. In addition, a gender-related risk around low participation of women together with associated mitigation measures have been added to the risk table in section 3.3 (see table 9 p108). Gender considerations have been fully integrated in the project activity plan and result framework. According to the GAP, the project will provide specific support to women willing to participate in agricultural activities by identifying and overcoming current challenges to participation. In addition, income-generating activities specifically targeting women will be implemented through the project, including poultry raising, handcraft activities. Project targets will be disaggregated by gender to monitor women participation to and benefit from the different project interventions. Gender Action Plan implementation, monitoring and updating will be conducted by a national gender expert working with the Project Management Unit and supported by an international gender expert when needed.

It is not clear from the PIF if gender is a significant barrier to participation. However, it is a very common social cleavage creating such barriers, and STAP strongly suggests the project team identify existing gender-based barriers to participation in the proposed processes and activities, and suggest ways of addressing these obstacles.	The gender-related issues and barriers to participation are identified in the gender assessment and solutions to address them identified in the gender-action plan (GAP) included in Appendix 13 of the Prodoc. The project team will also include national and international gender experts to ensure the full participation of women in the project.

The risks are valid and comprehensive. However, the project appears too dismissive of the risk that communities will not take up the interventions. This is a common occurrence, even in projects with participatory components, and STAP suggests the project consider carefully how it will identify such situations rapidly, how it might learn about the sources of low adoption and uptake, and the opportunities that might exist to pivot the project to address those sources	The risk of limited participation of communities to project activities is well-noted and the project team well aware of it. It has been informed by past experiences and key lessons learned collected through previous and ongoing projects especially the LDCF-2 project. This high risk has been included in the risk table 9 of section 3.3 of Prodoc and has guided the design of this project. It has for instance driven the approach to selection of project sites and beneficiaries. In addition, various sustainability mechanisms to ensure the full engagement of the local populations have been identified including: working with local chiefs to identify project beneficiaries; signing of engagement contract with beneficiaries; conditioning access to technical support and equipment to community engagement in reforestation and results of regular performance reports for agriculture activity; including sensitisation as part of relevant activities.
US Comments	
Consider how the project and associated funds will continue to support resilience to droughts and floods in the long term. Will projects need continued maintenance or support in years to come?	The project approach to sustainability is described in detail in section 3.6 p118 of the Prodoc and section 7 p57 of CEO ER. It was informed by lessons learned from other projects in Djibouti included on p68 of Prodoc. While sustainability will be built in the design of each output, an exit strategy will summarize clear responsibilities and budget ? for all the expected results. This is key to support project continuity over the long term. The preparation of this strategy will start early in the project lifespan to ensure the continuous engagement and commitment of relevant stakeholders who will take over specific project interventions or equipment; and to ensure full community ownership The project has directly involved the Regional Councils of each target regions to ensure the complete hand-over of key project activities including reforestation, which will contribute to strengthen riverbanks and reduce flood risks. Moreover, it is planned that service providers who will build weirs and gabion on the Gobaad and Tadjourah wadis will train relevant stakeholders on operation and maintenance of these infrastructure.

Ensure that gender equality is considered in the proposal, including understanding how women, children, and the elderly are disproportionately affected by adverse effects of extreme weather	The climate rational includes a description of climate extremes and change impacts on women (Table 6, p41 of the Prodoc). This section is based on a detailed Gender Assessment and Gender Action Plan developed during the PPG phase and included in Appendix 13 of the Prodoc
Consider the potential COVID-19 implications on this project, including short and medium term impacts.	Covid-19 implications on the PPG phase have been described in Prodoc section 5. A specific risk linked to COVID with mitigation measures has been included in the risk table 9 of prodoc and CEO ER. A checklist for identifying and managing environmental and social risks in project in context of COVID-19 has been provided by UNEP and will be used to identify Potential heightened risks to/from project due to COVID-19 and possible risk management measures and adjustments to project. See in the ESIA / ESMP Appendix 12 of the prodoc
Ensure that youth will be considered and involved in the planning and implementation of the project, recognizing that they are the future of the nation	Youth proportion in project site will be better defined during the project baseline study. Youth participation in project activities will be supported, age representativity will be one of the beneficiary selection criteria especially for agricultural training and other income-generating activities.
Determine measurable, definable, and attainable check points to measure the progress of the project. Ensure that reporting for these mid-term reports are being recorded and reported accurately.	The project result framework includes mid-term and end of project targets against which to assess project progress (Appendix 3 of prodoc). The baseline study will establish the data gathering approach and workplan for monitoring progress as measured by the project indicators. Through a continuous monitoring approach, the project will help to manage the project adaptively. The costed M&E workplan of the project is detailed in Appendix 6 of the prodoc (see p 214). It includes the biannual progress reporting including Project Implementation Report (PIR each July) and Half Year Report (HYR each January), the biannual Project Steering Committee Meeting as well as the Mid Term Review (MTR) and Terminal Evaluation checkpoints. The project CTA will ensure the implementation of this plan (sufficient work days have been provided to the CTA). In addition, regular meetings will be organized by the project coordinator with support from the executing lead entity (MEDD) with implementing partners to support follow-up, coordination and lessons learned. The project management unit, UNEP and the MEDD will also meet bi-annually during coordination calls to discuss progresses, identified implementation blockages or delays and agree on adaptive management solutions.

GERMANY	
Theory of Change: Germany appreciates the clearly defined stressors and problem statement. However, the corresponding theory of change is less explicit. Instead, processes describe interventions ? addressing the main reasons for the deterioration of the ecosystem ?, which are intended to improve the resilience of communities to droughts and floods in rural areas. Germany recommends improving on the Theory of Change in a way that interventions can be traced back to stressors and that allows for monitoring.	The Theory of Change was improved and complemented with problem trees (see Figures 10 and 11 in prodoc) for the two project sites ? which clearly identify climate and non-climate (anthropic) drivers of vulnerability, socio-economic root causes, first order impacts on ecosystems and second order socio-economic impacts on livelihoods. The problem trees outline for each region the chain of impacts (causal relationships) between the different drivers and impacts. In addition, ?solution trees? (Figures 23 and 24 of the prodoc) were prepared for both project areas to link the project?s preferred solutions with impacts on socio-economic conditions, ecosystems and livelihoods. Table 7 p49 of prodoc puts in relation each identified problem with its drivers and the solutions proposed by the project to address it. The Theory of Change (ToC), presented in a diagram p74 of Prodoc, captures the causal pathways highlighted in the problem trees, the solutions proposed in the solution trees as well as the barrier analysis and the assumptions. It shows the link between specific outputs, ambitious but realistic outcomes and impacts to achieve the project final objective. It clearly addresses the main reasons for ecosystem degradation including the human and climate pressure on those ecosystems.
Germany suggests to clearly identifying direct beneficiaries throughout the document.	The direct and indirect beneficiaries are clearly identified in the Prodoc section on target areas and beneficiaries p10-20. Table 1 summarizes project direct beneficiaries per activity type.

Germany appreciates the brief mentioning of changes in future rainfall variability in the project description section. However, Germany suggests expanding on that issue given the project?s focus on droughts and floods.	The climate rational section was expanded with available information on historical trend and projection based on both consultations and existent literature (please refer to section climate drivers of vulnerability p27 of the Prodoc). However, please note that Climate Change -related information and data are limited in Djibouti. GEF project LDCF 2 is currently developing climate change projections but it includes limited data on impacts (floods and droughts). The proposed LDCF 4 will implement research to improve knowledge of flood and drought risks to address this gap.
Germany appreciates the close alignment with ongoing initiatives. However, as the GCF Readiness funding for the country?s NAP has been listed under co-financing and is due to start in 2020, Germany suggests confirming if and when this project?s contribution would be effective.	NAP has been removed from the cofinancing plan because of a delayed approval and start; however, the project includes one activity (under Output 3.4) for the project to support, feed in, inform and link to the NAP process (e.g. through joined workshop for local adaptation planning).

Germany appreciates that proposal addresses multiple hazards. Components 1 and 2 each address a different climate hazard, droughts and floods respectively. However, some of the activities proposed under each are either very broad (e.g. multi-sectoral climate risk and vulnerability assessment) or relate to the other climate hazard. Germany suggests clarifying and focusing this further by appropriate indicators to ensure funding is not disbursed to duplicated activities under each component. Besides, awareness raising is currently present under both components 2 and 3, whereas the latter should be the only one dedicated to this matter.	The activities linked to improving knowledge and raising-awareness for policy change have been refined and moved under Component 3.

Germany appreciates the objective to target ?wider audiences that the immediate project beneficiaries?. Still the latter should be at the heart of such activities given their key role in these EbA activities implementation	Thank you, the direct beneficiaries are indeed the main focus of most project interventions and will be encouraged to be full engaged and actively participate to the implementation of project activities. Only awareness raising campaigns and exchange of experience and training activities in component 3 will have a wider scope to reach other communities and types of stakeholders in order to support project upscaling across Djibouti.

ANNEX C: Status of Utilization of Project Preparation Grant (PPG). (Provide detailed funding amount of the PPG activities financing status in the table below:

PPG Grant Approved at PIF: 200,000 usd			
Project Preparation Activities Implemented	***GEF/LDCF/SCCF/NPIF Amount ($)***		
	Budgeted Amount	***Amount Spent To date***	***Amount Committed***
Project personnel	119,000	106,912.71	0.00
1201 International consultant for project development	78,000	78,780	0.00
1203 National consultant for infrastructure feasibility study and cost estimate	12,000	12,000	0.00
1204 National consultant for Agriculture	12,000	12,000	0.00
1601 Travel (per diem, transport)	7,000	2,347.40	0.00
1602 Local Travel (per diem, transport)	10,000	1,785.31	0.00
Stakeholder consultation	30,000	4,076.84	0.00
3301 Meetings and Workshops	30,000	4,076.84	0.00
Miscellaneous component	4,000	0.00	0.00

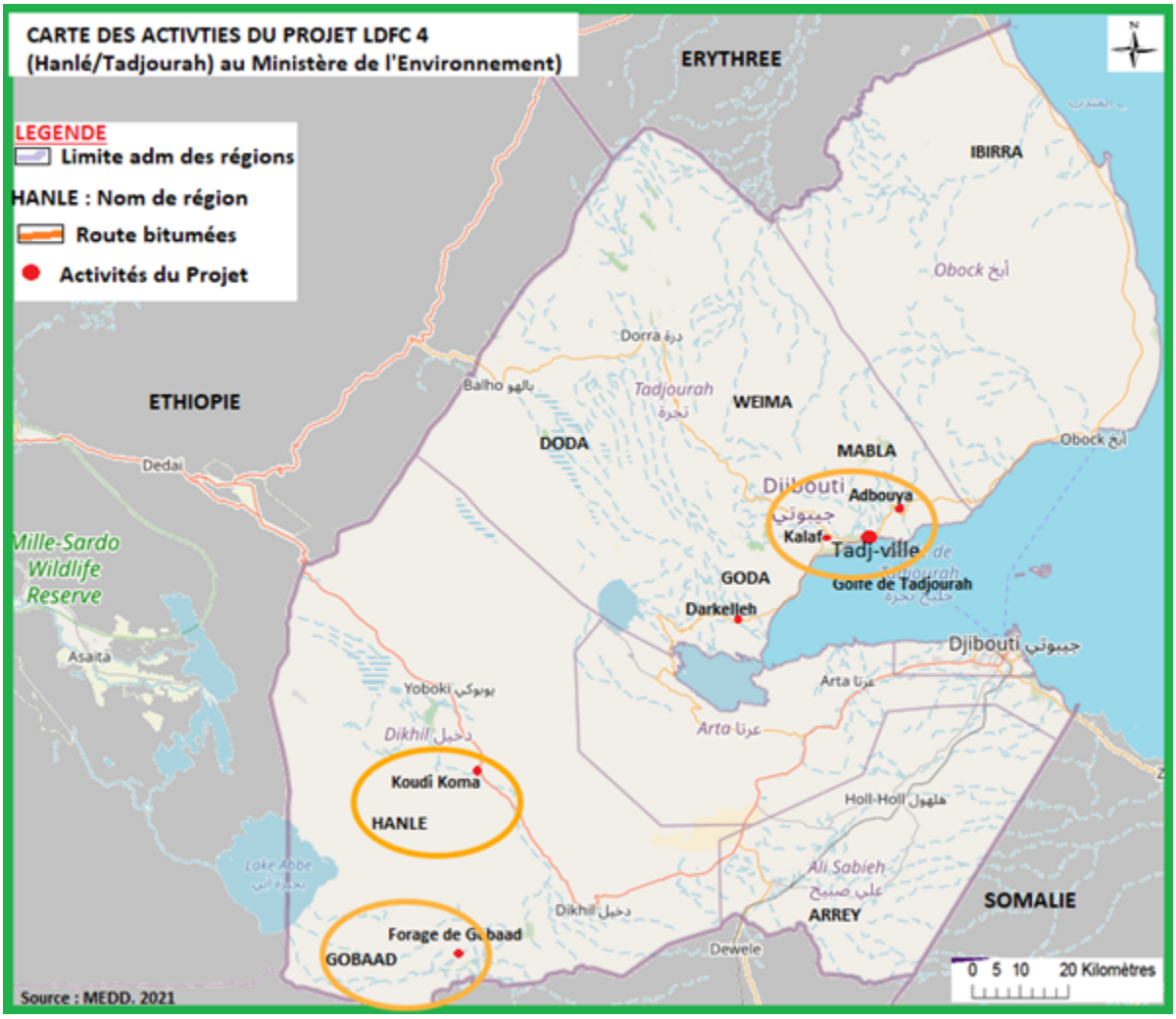
5100 Miscellaneous costs including bank fees and exchange rate losses approved by UNEP	4,000	0.00	0.00
Total	**153,000**	**110,989.55**	**0.00**
Total Remaining Budget	**89,010.45**		

ANNEX D: Project Map(s) and Coordinates

Please attach the geographical location of the project area, if possible.

1b. Project Map and Geo-Coordinates.

Figure 8: Project map



Adbouya ; N 11'51'34.8"
E 43'00'54.54.6"
Alt: 3012 m

Kalaf-village : N 11'45'31.28"
E 42'47'29.27"
Alt :12 m
Kourri (Kouddi-Koma) : N 11'21'09.9"
E 42'09'31.7"
Alt : 212 m
Forage de Gobadd : N 11'05'46.6"
E 42'10'0.51"
Alt : 407 m
Liliya-Bourri : N 11'25'38.27"
E 42'54'26.51"
Alt :163 m
Sourate : N 11'48'35'.17"
E 42'54'16.67"
Alt :127 m
Darkelleh : N 11'37'49'.57"
E 42'38'26.88"
Alt :247 m

ANNEX E: Project Budget Table

Please attach a project budget table.

Project implementation period:		Expenditure by project component/activity						Expenditure by calendar year				
2022												
2027												
UNEP Budget Line		Outcome 1	Outcome 2	Outcome 3	PM	M&E	Total	Year 2022	Year 2023	Year 2024	Year 2025	Year 20
PERSONNEL COMPONENT												
1100	**Project personnel**											
1101	Project National Coordinator	60,000	60,000	45,000	15,000		180,000	30,000	30,000	30,000	30,000	3
1102	Financial Officer				72,000		72,000	12,000	12,000	12,000	12,000	1
1104	Project Officer	10,000	10,000	10,000	42,000		72,000	12,000	12,000	12,000	12,000	1
1199	**Sub-total**	**70,000**	**70,000**	**55,000**	**129,000**	-	**324,000**	**54,000**	**54,000**	**54,000**	**54,000**	**5**
1200	**Consultants**											
1201	Chief Technical Adviser (CTA)			346,000			346,000	100,000	60,000	60,000	42,000	4
1202	International gender expert			66,500			66,500	7,000	14,000	14,000	14,000	1
1203	International market analysis Consultant	21,000					21,000			21,000		
1204	International agronomist		70,000				70,000	14,000	14,000	14,000	14,000	1
1205	International CCA specialist		98,000				98,000	28,000	28,000	28,000	14,000	
1206	International M&E specialist					56,000	56,000	7,000	7,000	7,000	21,000	
1207	Internsational climate change adaptation and land planning expert			70,000			70,000				70,000	
1208	International expert on climate finance			28,000			28,000				21,000	
1209	International EbA expert		42,000				42,000	7,000	14,000	14,000	7,000	
1210	International charcoal markt amd impact analyst	10,500	10,500				21,000			21,000		
1211	International hydrologist		72,000				72,000		36,000	36,000		
1212	National expert in finance			10,000			10,000				5,000	
1213	National communication and sensitisatin expert			20,000			20,000				5,000	1
1214	National Engineer	42,000					42,000	6,000	12,000	12,000	6,000	
1215	National Nurserymen (4 in Dikhil + 1 in Tadjourah)	360,000	90,000				450,000	45,000	90,000	90,000	90,000	9
1216	National Agronomist (1 fro Dikhil and 1 fro Tasdjourah)	90,000	90,000				180,000	18,000	36,000	36,000	36,000	3
1217	Agricultural technicians (12 in Tadjourah and 12 in Dikhil)	300,000	300,000				600,000		96,000	144,000	144,000	14
1218	National Market analysis consultant	25,000					25,000			5,000	10,000	1
1219	National Poultry Expert	20,000					20,000			10,000	10,000	
1220	National veterinary expert	10,000					10,000			5,000	5,000	
1221	National gender consultant		72,000				72,000	12,000	12,000	12,000	12,000	1
1222	Regional Focal Points	36,000	36,000				72,000	12,000	12,000	12,000	12,000	1
1223	National climate change consultant			25,000			25,000			5,000	5,000	1
1224	National M&E consultant					120,000	120,000	20,000	20,000	20,000	20,000	2
1225	Driver				36,000		36,000	6,000	6,000	6,000	6,000	
1299	**Sub-total**	**914,500**	**880,500**	**565,500**	**36,000**	**176,000**	**2,572,500**	**282,000**	**457,000**	**572,000**	**569,000**	**45**
1600	**Travel on official business**						-					
1601	Travel & DSA for Chief Technical Adviser (CTA)			72,500			72,500		16,000	16,000	13,500	1
1602	Travel & DSA for International gender expert			25,000			25,000	3,750	4,500	4,500	4,500	
1603	Travel & DSA for expert on CCA and local planning			9,500			9,500				9,500	
1604	Travel & DSA for International expert on climate finance			4,500			4,500				4,500	
1605	Travel & DSA for International M&E expert					22,000	22,000	3,250	3,250	3,250	5,750	
1606	Travel & DSA for International CCA specialist		13,000				13,000	3,250	3,250	3,250	3,250	
1607	Travel & DSA for International agronomist		22,500				22,500	4,500	4,500	4,500	4,500	
1609	Travel & DSA for EbA expert		18,000				18,000	4,500	4,500	4,500	4,500	
1610	Travel & DSA for Internationla market expert	4,500					4,500			4,500		
1611	Travel & dsa for int. charcoal market consultant		5,750				5,750			5,750		
1611	Travel for Int. expert on CCA and local planning to conduct in-site consultation			5,000			5,000				5,000	
1612	Travel of Dikhil and Tadjourah RC staff members to Djibouti for learning environmental mgt and CCA			2,000			2,000		1,000	1,000		
1613	Study tour of other RC to project sites			4,000			4,000				2,000	
1614	Travel & DSA lumpsum for national consultants			18,000			18,000	3,000	3,000	3,000	3,000	
1699	**Sub-total**	**4,500**	**59,250**	**140,500**	-	**22,000**	**226,250**	**22,250**	**40,000**	**50,250**	**60,000**	**3**
Component total		**989,000**	**1,009,750**	**761,000**	**165,000**	**198,000**	**3,122,750**	**358,250**	**551,000**	**676,250**	**683,000**	**5**
SUB-CONTRACT COMPONENT												
2100	**Sub-contracts (MOUs/LOAs for cooperating agencies)**						-					
2101	Consultancies for detailed wadi analysis	152,000	160,000				312,000	152,000	160,000			
2102	EIAs for Output 1.1 & 2.1	10,000	10,000				20,000	20,000				
2103	contract to rehabilitate 60 wells in Gobaad	360,000					360,000	60,000	240,000	60,000		
2104	Contract to strengthen the Gobaad wadi	892,400					892,400		332,250	560,150		
2105	Contract to build 3 tree nursereis in Gobaad and 1 in Tadjourah	90,000	30,000				120,000	30,000	90,000			
2106	4 store rooms to put nursery equipment	30,000	10,000				40,000	10,000	30,000			
2107	Construction of 60 water reservoirs	360,000					360,000		120,000	240,000		
2108	60 solar kits for water pumps	48,000					48,000			48,000		
2109	60 set of irrigation pipes	120,000					120,000		40,000	80,000		
2110	Fencing of 20 gardens	150,000					150,000			100,000	50,000	
2111	Building of 50 composting units	20,000					20,000			20,000		
2112	Building of small seed nurseries on agricultural demonstration plots	20,000					20,000		20,000			
2113	Building of a community energy centre in Tadjourah and in Gobaad	26,000	26,000				52,000				52,000	
2114	Contract for training of 50 women in Gobaad and 150 women in Tadjourah on craft-making	50,000	70,000				120,000			60,000	60,000	
2115	company to buld gabion walls and weir on Tadjourah Badouli wadi		1,470,650				1,470,650		700,000	500,000	270,650	
2116	Fencing of restored wadi banks		69,500				69,500			69,500		
2117	10 community-managed fodder gardens		240,000				240,000		40,000	100,000	100,000	
2118	Intervention on prosopis convertion		80,000				80,000		40,000	30,000	10,000	
2119	Economic evaluation of Ecosystem services and Cost Benefit Analysis			115,000			115,000	50,000	65,000			
2121	Com contract to produce Lessons learned (videos/how-tos)			15,000			15,000				5,000	
2122	Contract to produce multi-sectoral risk maps			82,000			82,000		50,000	32,000		
2123	Truck rental for reforestation activities	10,000	10,000				20,000		10,000	10,000		
2199	**Sub-total**	**2,338,400**	**2,176,150**	**212,000**	-	-	**4,726,550**	**322,000**	**1,937,250**	**1,909,650**	**547,650**	
Component total		**2,338,400**	**2,176,150**	**212,000**	-	-	**4,726,550**	**322,000**	**1,937,250**	**1,909,650**	**547,650**	
TRAINING COMPONENT												
3200	**Group training**											
3201	Training workshop on M&E approaches (Output 3.2)			48,000			48,000		48,000			
3202	Develop and print support for reforestation	3,000					3,000		3,000			
3203	Develop and print agricultural training material	6,000	8,000				14,000	2,000	4,000	4,000	4,000	
3204	Develop and print training manuals for cooperatives	4,000					4,000		2,000	2,000		
3205	Stationery to support cooperative training	7,000					7,000				7,000	
3206	Exchange visit for Tadjourah farmers		5,000				5,000		5,000			
3207	Develop and print material for training on adaptation mainstreaming in local dev plans			5,000			5,000				5,000	
3208	PMU staff member training			21,000			21,000	7,000		7,000		
3299	**Sub-total**	**20,000**	**13,000**	**74,000**	-	-	**107,000**	**9,000**	**62,000**	**13,000**	**16,000**	
3300	**Meetings/Conferences**											
3301	Consultative workshop to develop local adaptation plans			20,000			20,000				20,000	
3302	Validation workshops in Dikhil and Tadjourah			40,000			40,000			20,000	20,000	
3303	Prinint gmaterial for awarness raising campaigns			20,000			20,000		5,000	5,000	5,000	
3304	Radio and TV-based public awaress progamming on EbA			30,000			30,000				10,000	1
3305	Annual Environment Day			10,000			10,000		2,000	2,000	2,000	
3306	Coordination support for the NAP process			5,000			5,000				5,000	
3307	National sensitisation workshop			25,000			25,000					2
3308	Attendance to 2 international events			7,000			7,000			3,500		
3399	**Sub-total**	-	-	**157,000**	-	-	**157,000**	-	**7,000**	**30,500**	**62,000**	**4**
Component total		**20,000**	**13,000**	**231,000**	-	-	**264,000**	**9,000**	**69,000**	**43,500**	**78,000**	**5**

ANNEX F: (For NGI only) Termsheet

Instructions. Please submit an finalized termsheet in this section. The NGI Program Call for Proposals provided a template in Annex A of the Call for Proposals that can be used by the Agency. Agencies can use their own termsheets but must add sections on Currency Risk, Co-financing Ratio and Financial Additionality as defined in the template provided in Annex A of the Call for proposals. Termsheets submitted at CEO endorsement stage should include final terms and conditions of the financing.

ANNEX G: (For NGI only) Reflows

Instructions. Please submit a reflows table as provided in Annex B of the NGI Program Call for Proposals and the Trustee excel sheet for reflows (as provided by the Secretariat or the Trustee) in the Document Section of the CEO endorsement. The Agencys is required to quantify any expected financial return/gains/interests earned on non-grant instruments that will be transferred to the GEF Trust Fund as noted in the Guidelines on the Project and Program Cycle Policy. Partner Agencies will be required to comply with the reflows procedures established in their respective Financial Procedures Agreement with the GEF Trustee. Agencies are welcomed to provide assumptions that explain expected financial reflow schedules.

ANNEX H: (For NGI only) Agency Capacity to generate reflows

Instructions. The GEF Agency submitting the CEO endorsement request is required to respond to any questions raised as part of the PIF review process that required clarifications on the Agency Capacity to manage reflows. This Annex seeks to demonstrate Agencies? capacity and eligibility to administer NGI resources as established in the Guidelines on the Project and Program Cycle Policy, GEF/C.52/Inf.06/Rev.01, June 9, 2017 (Annex 5).