



Project Identification Form (PIF) entry – Full Sized Project – GEF - 7

Enhancing Adaptive Capacity of communities by up-scaling best practices and adopting an integrated approach in Ethiopia

Part I: Project Information

GEF ID

10174

Project Type

FSP

Type of Trust Fund

LDCF

CBIT

No

Project Title

Enhancing Adaptive Capacity of communities by up-scaling best practices and adopting an integrated approach in Ethiopia

Countries

Ethiopia

Agency(ies)

UNDP

Other Executing Partner(s)

Environment Forestry and Climate Change Commission Private Sector and Civil Society will be actively involved

Executing Partner Type

Government

GEF Focal Area

Climate Change

Taxonomy

Focal Areas, Climate Change, Climate Change Adaptation, Least Developed Countries, Livelihoods, Mainstreaming adaptation, Climate resilience, Influencing models, Demonstrate innovative approach, Strengthen institutional capacity and decision-making, Stakeholders, Civil Society, Community Based Organization, Non-Governmental Organization, Communications, Behavior change, Awareness Raising, Indigenous Peoples, Local Communities, Type of Engagement, Participation, Private Sector, SMEs, Large corporations, Gender Equality, Gender results areas, Capacity Development, Access and control over natural resources, Gender Mainstreaming, Women groups, Sex-disaggregated indicators, Beneficiaries, Gender-sensitive indicators, Capacity, Knowledge and Research, Learning, Innovation, Knowledge Generation

Rio Markers**Climate Change Mitigation**

Climate Change Mitigation 0

Climate Change Adaptation

Climate Change Adaptation 2

Duration

60 In Months

Agency Fee(\$)

848,580

Submission Date

4/4/2019

A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
CCA-1	LDCF	7,042,420	55,300,000
CCA-2	LDCF	1,890,000	16,900,000
	Total Project Cost (\$)	8,932,420	72,200,000

B. Indicative Project description summary**Project Objective**

To promote the design and implementation of adaptation interventions to address the climate vulnerabilities of local communities at scale across Ethiopia

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
1. Institutional and technical capacity development for coordination and climate mainstreaming	Technical Assistance	1. Strengthened regional and local institutional and technical capacity for coordination of climate resilient planning and investment	<p>1.1 Training provided on tools and methodologies for gender-sensitive climate vulnerability and risk assessments and gender-responsive adaptation planning at the kebele, woreda and city levels.</p> <p>1.2 Integrated climate change adaptation/ disaster risk reduction plans – with gender action plans – developed at the regional, city and local levels for key sectors.</p> <p>2.3. Climate change focal points identified and trained on coordination</p>	LDC F	800,000	6,500,000

2. Access to climate-smart technology	Investment	2. Access to climate-smart technologies and practices for cost-effective adaptation is enhanced	<p>2.1 Training-of-trainers undertaken for decision makers and technical staff in targeted woredas and cities on implementation of gender-sensitive adaptation technologies tailored to local socio-economic and environmental contexts, including using climate data and forecasts to inform adaptation interventions at the community level.</p> <p>2.2 Targeted training to farmers in selected woredas on climate-smart agricultural practices, including the use of seasonal forecasts and climate advisories in their farming decisions.</p> <p>2.3 Localised weather and climate advisories disseminated to provide real time agro-meteorological information to farmers, pastoralists and local decision makers.</p> <p>2.4 Adaptation technologies and climate-smart agricultural practices – including previously identified best practices such as water and soil resource management, solar powered irrigation pumps, drought tolerant crop varieties introduced and scaled in targeted woredas and cities, targeting 225,000 beneficiaries.</p> <p>2.5. Private-sector driven adaptation technologies, practices and climate information dissemination partnerships identified and developed for autonomous scaling up of adaptation.</p>	LDC F	4,557,067	45,000,000
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3. Integrated landscape management	Technical Assistance	Outcome 3: Community and institutional capacity for integrated landscape management	<p>3.1. Training provided on participatory integrated land use mapping, valuation, monitoring and decision support using GIS and drone technologies.</p> <p>3.2. Landscape maps developed and management practices for managing, conserving, using and restoring resources for resilient social, economic and environmental outcomes/benefits developed through participatory approaches and mapping technologies.</p> <p>3.3. Guidance manuals for integrated landscape management practices developed and disseminated to woreda technical staff.</p>	LDC F	1,000,000	10,400,000
4. Livelihood diversification	Investment	Outcome 4: Gender-responsive options for alternative livelihoods transferred to community to build resilience and reduce climate change vulnerability	<p>4.1. Training programmes for youth and women's organisations (4 groups per woreda) including technical/financial assistance for: (i) alternative income-generating livelihoods; and (ii) entrepreneurship, business skills and leadership.</p> <p>4.2. Small-scale business plans and investment opportunities developed in partnership with private sector players.</p> <p>4.3. Diversified livelihood activities introduced and scaled in targeted woredas and cities</p>	LDC F	2,150,000	10,300,000
Sub Total (\$)					8,507,067	72,200,000
Project Management Cost (PMC)						
					LDCF	425,353

Sub Total(\$)**425,353****0**

Total Project Cost(\$)**8,932,420****72,200,000**

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

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
Government	Government of Ethiopia	In-kind	Recurrent expenditures	12,500,000
Donor Agency	Adaptation Fund	Grant	Investment mobilized	10,000,000
Donor Agency	Green Climate Fund	Grant	Investment mobilized	45,000,000
Others	Government of Italy	Grant	Investment mobilized	4,300,000
GEF Agency	UNDP	Grant	Recurrent expenditures	400,000
Total Project Cost(\$)				72,200,000

Describe how any "Investment Mobilized" was identified

The co-financing was identified through initial discussions within government agencies that will be implementing the GCF, Adaptation Fund and Government of Italy projects to make use of the synergies between these projects and the proposed LDCF project. The nature of the activities under these projects fall in the "Investment mobilized" category, if they are not meant to support government salaries and operational expenses. The UNDP co-financing will be used to support the project activities in a flexible manner whenever the GEF resources cannot be used.

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

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
UNDP	LDCF	Ethiopia	Climate Change		8,932,420	848,580	9,781,000
Total GEF Resources(\$)					8,932,420	848,580	9,781,000

E. Project Preparation Grant (PPG)

PPG Amount (\$)

200,000

PPG Agency Fee (\$)

19,000

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
UNDP	LDCF	Ethiopia	Climate Change		200,000	19,000	219,000
Total Project Costs(\$)					200,000	19,000	219,000

Part II. Project Justification

1a. Project Description

1) Global environmental problem, root causes and barriers

Global environmental problem and root causes

Ethiopia is a land-locked country with a total area of ~1.1 million km². Ethiopia has a diverse terrain with a high central plateau – varying from 1,290 to 3,000 m above sea level – that gradually slopes to the lowlands in the west and plains to the south-east. Ethiopia's population is estimated at ~94 million, with an average growth rate of 2.6%. As the main sector underpinning food security and the economy, agriculture is under pressure to meet the needs of the rapidly growing population and support the country's economic productivity.

The climate of Ethiopia varies greatly with a temperate climate on the plateau and hot in the lowlands. In Addis Ababa, which ranges from 2,200 to 3,100 m in altitude, the maximum average temperature is 26°C with an average minimum of 4°C. The weather is categorised as hot and dry, with the exception of the short (Belg) rains that occur from February to April and the big (Kiremt) rains from mid-June to mid-September. In addition to the variation in climate – which is dependent on elevation – the year is divided into three seasons. Winter – the cold season – lasts from October to February (Bega). The cold season is followed by a dry hot period, which then gives way to the Kiremt rainy season in mid-June.

It has been observed, however, that these weather variations are now changing as a result of climate change. Specifically, during the period 1981–2000, there was a decrease in annual rainfall during the Belg season with slight increases during the Kiremt and Bega seasons. In the Southern lowlands, there was a decrease in mean annual rainfall from 1971–2010 of 3.6 mm per year. Mean annual temperature across Ethiopia has increased by 1.3°C between 1960 and 2006 at a rate of 0.28°C per decade. Future climate change is expected to include an increase in mean annual temperature of 1.1 - 3.1°C by the 2060s, and 1.5 - 5.1°C by the 2090s. Projections from climate models indicate that Ethiopia will experience increased variability in mean annual rainfall. These projected increases are largely attributed to an increase in rainfall during Belg in Southern Ethiopia.

The changes in Ethiopia's climate are anticipated to result in a number of negative impacts on vulnerable communities, including droughts and floods. The impacts of past droughts and climatic changes have been particularly detrimental to Ethiopia's agricultural sector. For example, seven major droughts have occurred over the past 25 years, five of which have resulted in famine [1] World Bank 2010. Furthermore, since 1988 Ethiopia has experienced six major floods. The number of flooding events and associated damages increased between 1996 and 2006. Ethiopia experienced one of the most severe droughts of the last 30 years brought on by El Niño events in 2015. The drought impacted on the livelihoods of ~10 million people, namely through food insecurity where the population has become reliant on humanitarian support through food aid. This has left 2.7 million people with malnutrition and 2.1 million without access to safe drinking water. In addition, the drought is causing losses to livestock and decreased agricultural production owing to crop failure.

The proposed LDCF project will address the problem that the livelihoods of Ethiopian communities are vulnerable to the impacts of increasing climate variability and climate change. Climate change is affecting sustainable development in Ethiopia because the livelihoods of the majority of the population are sensitive to climate-related shocks, including drought and flooding. This is as a result, in part, of the economic reliance on rain-fed agricultural production. Climate change is likely to exacerbate the impacts of degradation of the country's environmental resources – including arable land, water, pasture and forest – with connected impacts on Ethiopia's food and water securities. Consequently, Ethiopian communities in both rural and urban settings will be impacted by this predicted climate change variability. Currently, ~8.2 million people are already considered "chronically" food insecure in Ethiopia, with ~6.7 million people facing food insecurity. Both categories are characterised by a weak resilience to withstand climate-related shocks, such as severe droughts.

Addressing climate change is of critical importance in Ethiopia. The Ethiopian economy remains reliant on: i) climate-sensitive agriculture and natural resources management ; ii) rainfall; and iii) natural resource dependent energy – biomass and hydropower. Recent assessments have estimated that economic growth could decrease by up to 2.5% per year unless capacity building and climate change adaptation measures are implemented . Further to this, climate change is expected to further impact Ethiopia's income inequality , affecting both rural and urban communities.

The impacts of weather variability and climate change will not be uniform across the country as some regions are more vulnerable than others. Vulnerability will depend on livelihood type and exposure to risk, both of which are highly variable even at the small/local scale and within cities . Changes in the weather patterns marked by greater variability are imposing additional risks to human development in Ethiopia. These risks are most heavily borne by farmers engaging in subsistence or rain-fed agriculture, both for landless households whose income largely derives from on farm wage labour, and women headed households because of their vulnerability to external shocks. Ethiopia's Policy on Women acknowledges that women have lacked the opportunities provided to men and as a result, they have fallen behind in all fields of self-advancement. Climate change will affect the socially constructed dynamic between men and women and may undermine efforts to build more equitable access to development. If under climate change-induced stress, institutional structures place unequal emphasis on responding to the needs of men and women, they risk weakening the adaptive capacity of one group over another. While this weakening is being observed in both rural and urban settings, those in cities are protected to a certain extent from this imbalance as there are more opportunities presented than in rural structures. In addition to this, women provide most the labour force in the agricultural sector which predominantly resides in rural settings. Therefore, women are impacted more than men from climate change and extreme weather events as it directly affects their livelihoods. The proposed LDCF project aims to build community self-reliance so that dependence on the State for adaptation resources is reduced as communities themselves – both men and women – tailor adaptation technologies and techniques to their own needs. Self-reliance will be promoted through training activities that focus on gender-sensitive adaptation specific to the local socio-economic and environmental contexts. Further to this, the proposed LDCF project will focus on training of trainers for decision makers within woredas and cities, contributing to the sustainability of adaptation interventions in communities.

The long term preferred solution is for adaptation to be an integral part of Ethiopian livelihoods, specifically among vulnerable communities. It needs to operate at multiple use landscapes that integrate livelihood-supporting production functions and the sustainable supply of ecosystem goods and services. Several adaptation projects have provided selected Ethiopian communities with experiences of solutions that work. The scaling up of such adaptation practices and technologies requires the use of innovative models and tools that enable their autonomous uptake at household, community and institutional levels. It also needs adaptation solutions to take on a more integrated approach at the landscape level or ecosystem level.

The proposed project will therefore upscale successful project experiences of GEF's community-based adaptation projects in Ethiopia and apply integration and innovation approaches for transformational impact. Integrated planning, application of drones and GIS data based planning, digital technology, private

sector business models, micro-finance and community entrepreneurship and risk insurance will be considered in the project. The project will focus on rural areas and also two peri-urban regions to support integrated adaptation in the selected locations.

The project will empower communities and institutions to plan and implement adaptation interventions in a deliberate and proactive manner, reducing reliance on the Government of Ethiopia to provide already scarce resources for climate change adaptation. Building community self-reliance will enable them to tailor adaptation tools and technologies to their specific needs. At the local level, new technologies in combination with traditional technologies will be promoted to ensure that productivity and sustainability of livelihoods are maintained under a range of future climate change scenarios. These adaptation actions and associated technologies or practices will build on the natural resilience and innovativeness of Ethiopian communities to build their self-reliance and capacity to continue the adaptive process iteratively.

More specifically, an effective adaptation solution for vulnerable communities involves the availability of seasonal forecasts and assistance in interpretation of forecasts for implementation in their respective livelihood measures. Through forecasts and climate information services, individuals are able to make informed decisions and take advance adaptive actions for the coming season. Woreda and urban communities need to be trained in the use of climate information as well as mobilised to plan and implement the most effective adaptation measures. Such adaptation strategies as climate-smart conservation agriculture, integrated and diversified farming systems, improved management of rangelands and other ecosystems, urban diversification of livelihood options are all in combination critical elements for a long-term adaptation solution in the context of risks and vulnerabilities of Ethiopia.

However, the proposed adaptation solution for vulnerable Ethiopian communities is challenged by several barriers. These barriers are summarised in the section below and directly relate to the successful implementation of the proposed LDCF project and the sustainability of promoting adaptation interventions in Ethiopia, specifically the vulnerable woreda and peri-urban communities.

Barriers

Limited access by local communities and local institutions to training opportunities on climate change adaptation practices

At present, there are few initiatives – either through the Ethiopian Government (GoE) or elsewhere – to conduct training activities supporting the implementation of the CRGE. Most of the communities and local institutions do not have access to these initiatives. In particular, there are few training programmes on integrated land management practices for climate change adaptation that are appropriate for Ethiopia's ecosystems. In addition, there are limited opportunities available for training on how to mainstream activities that are congruent with the CRGE strategy into decision making and agricultural planning, either at the federal or regional and woreda levels.

Limited understanding in communities and in the private sector of the risks and opportunities presented by climate change

The causes and implications of current and future climate change are not well understood within communities. The technical understanding of climate change and its impacts are currently limited to a few experts and decision makers. Specifically, local farmers and agro-pastoralists are largely unaware of the additional risks that climate change poses to their livelihoods, such as the exacerbation of droughts and soil erosion. Similarly, knowledge of the opportunities presented by climate change – and how to take advantage of these opportunities – is limited in Ethiopian communities. Businesses and investors also do not integrate the risks and opportunities presented by climate change. The responses of individuals to climate stress is largely shaped by the traditional knowledge base and what is seen as appropriate behaviour. Traditional practices for coping with climate variability include the sale of livestock or other assets, looking for alternative forms of work and livelihoods, and receiving food aid. However, these responses to climate stress are largely maladaptive, as they only provide temporary solutions and are thus no longer appropriate as climate variability intensifies.

Lack of access by local communities and institutions to modern technologies and methods for landscape level planning and monitoring
Currently, climate change adaptation interventions and projects do not undertake landscape level climate change adaptation, planning and monitoring, but rather promote direct interventions at the field level. This is compounded by the fact that local communities and institutions lack understanding on ecosystem functions and linkages across entire landscapes and how these can be planned and managed for wider resilience. Moreover, they do not have access to the technologies and methods that enable them to plan the management of landscapes and monitor change over time. They largely depend on central government sources of information which is inadequate, outdated and often of low resolution for them to use them in local level adaptation planning. Modern technologies for mapping and monitoring are currently unavailable and beyond the reach of these communities and the local government institutions that support them. They are therefore unaware of the ecosystem changes that take place across the entire landscape that undermine their adaptive capacity and are not able to address them in time, leading to unobserved and slow onset of loss of their natural adaptive assets. This also leads to narrowly defined adaptation options.

Imbalance in gender specific adaptation options addressing women's vulnerabilities to climate change
Gender equality is an on-going problem in Ethiopia. There are many disparities between men and women in Ethiopian culture, with the most prominent challenges being social acceptance and access to education for women. As women form the majority of the labour force in the Ethiopian agricultural sector and risks are most heavily borne by farmers engaging in subsistence agriculture because of their vulnerability to climate shocks, women are by default more exposed to the impacts of climate change. In addition, climate change further exacerbates the socially skewed dynamic between men and women by undermining previous efforts to build more equitable access to development. The proposed LDCF project will focus on gender-specific training and training of trainers for decision makers within woredas and cities. Training will be specific to gender responsive adaptation options to inform adaptation planning at the kebele, woreda and city level. The existing gender imbalance amongst Ethiopian communities poses a barrier for the proposed LDCF project as community individuals may choose to disregard project activities that focus on women development.

Limited knowledge and awareness of climate change adaptation among policy makers
At present, there is limited knowledge of the expected impacts of climate change as well as knowledge on potential options for promoting climate change adaptation. While some general awareness has been fostered through past and on-going initiatives, detailed knowledge on approaches, tools and methodologies for identifying and selecting adaptation interventions – based on local-level socio-economic and environmental contexts – remains inadequate for the formulation of comprehensive programmes of work aimed at addressing climate risks. Climate change is therefore not adequately factored into policies, strategies, plans and budgets for addressing Ethiopia's development needs.

Limited capacity of farmers and agro-pastoralists to implement best practices for climate change adaptation in agriculture
Historically, Ethiopia's farmers and agro-pastoralists have implemented some climate resilient measures to cope with the country's extremely variable climate – for example, using traditional crop varieties that have some drought tolerance. However, these measures remain inadequate for maintaining agricultural production under the current climatic conditions and will be further undermined under future conditions of climate change. Traditional practices and crop/livestock varieties were suitable for the historical climate variability, but are not able to cope with the extreme unpredictability expected under future climate scenarios. Innovative agricultural practices would enable farmers to maximise the yields of traditional crop/livestock varieties, while newer strains from scientific breeding processes have greater resilience to climate variability as compared to the traditional varieties. However, without access to knowledge and training on international best practices for climate-smart agriculture and new varieties of climate-resilient crops and livestock, farmers and agro-

pastoralists will not have the necessary capacity to plan and implement adaptive practices that are based on up-to-date scientific information on future climatic changes.

Farmers' limited access to climate forecasts and extension services for decision-making

Information about climate forecasts is largely inaccessible to Ethiopian farmers and agro-pastoralists. In addition, information on how to adopt alternative and innovative farming and agro-pastoral practices based on these climate forecasts is not currently available. This is as a result of: i) insufficient availability of climate forecast information, particularly at the local level; ii) inadequate access to climate forecast information; and iii) inadequate capacity of agricultural extension officers to guide decision-making processes – based on climate forecasts – in local communities. Although considerable research has been conducted in Ethiopia on reducing community responses to climate vulnerability, it is not necessarily readily available to farmers and communities in accessible form or language. Consequently, farmers and agro-pastoralists can only undertake limited proactive measures in response to climate change. Challenges for relaying climate information to communities and farmers include: i) current data recordings are printed on paper and posted on community noticeboards where they are damaged and rendered unreadable by exposure to rain and sunshine; and ii) limited communication and network service for farmers in remote woredas to receive daily forecasts via cell phone. Government extension agents at woreda level have sub optimal access to technical training on the implementation of climate change adaptation interventions. The extent to which rural farmers adopt and implement climate-smart agriculture practices largely depends on the quality and availability of extension services in each area. As a result of the limited capacity of extension agents and poor transfer of knowledge, insufficient information on climate change adaptation interventions reaches local communities.

Limited resilience of urban communities to climate change

Ethiopian urban environments are under pressure because of the rapid urbanisation of the cities. This pressure is increased by climate change effects including inter alia urban flooding, fire, earthquakes, water scarcity and social vulnerability. Urban environments create heat islands which are sharp temperature increases during prolonged dry periods. City areas experience significantly warmer heat island effects than rural areas because of human activity. Heat generated from waste and modified land surfaces contribute the most to the urban heat. As population centres grow because of rural-urban migration, the average temperature of the area increases as well. Agricultural areas surrounding these urban centres experience greater variability in rainfall amounts and extreme events. Urban environments are incapable of withstanding long periods of rains, with flooding a regular occurrence, damaging infrastructure and often resulting in loss of lives. Together with implementing policies and climate-related plans through stronger government structures, urban environments require citizen engagement efforts using climate change adaptation as the main focal point.

The proposed LDCF project will provide the framework for mainstreaming climate change adaptation into integrated development planning at the local level. This will be done through upscaling and promoting community-based adaptive practices that have been implemented under the previous UNDP-LDCF project "Promoting autonomous adaptation at the Community level in Ethiopia" (PAA project) and to extend these activities across the country. The project will also build on the current project under development "Climate Change Adaptation in the Lowland Ecosystems of Ethiopia." While these projects focus on specific interventions (adaptation technologies and practices) in specified localities, the proposed project strategically uses these successful and proven interventions and applies them in an approach that not only targets new communities, but promotes integrated approaches to adaptation, and proactively involves the private sector in climate change adaptation as well as rural-urban linkages. The earlier projects have provided "proof of concept" on adaptation technologies and practices which will be widely promoted and mainstreamed into planning without having to go through piloting processes in the proposed project. This makes it easier for both policy makers and private sector to adopt and mainstream those that have already been proved to work. Specifically, the proposed project will upscale the PAA project activities in additional *woredas* across the highlands and lowlands in five regions and four urban areas. The Climate Change Adaptation in the Lowland Ecosystems of Ethiopia project under development will serve as an ongoing case study for the proposed project. The

knowledge management and capacity building components of the proposed project will derive their practical perspectives from the earlier projects. The selection of these regions are cities will be finalised during the Project Preparation Grant (PPG) phase. Upscaling will involve adopting approaches to local environmental and socio-economic contexts specific to the selected woredas. It will also involve introducing approaches that operate across landscapes that have defined and interconnected ecosystem functions as well as technologies for monitoring change across these landscapes and planning their management using participatory methods. The project also recognizes the linkages between urban and rural environments, and the increasing vulnerability of urban communities due to the impacts of climate change within the urban areas themselves and those impacts outside urban areas. Effective scaling and integrated approaches therefore requires building urban resilience together with rural resilience.

2) Baseline scenario

Ethiopia has a rapidly growing population²² and has committed to achieving ambitious socio-economic goals that would see the country attain middle-income status by 2025 . These socio-economic goals are being undermined by the observed effects of climate change. Specifically, declines in rainfall during Belg are reducing the extent and productivity of agricultural land, while increased frequency of droughts is resulting in reduced food security following poor rainy seasons . The pursuit of Ethiopia's socio-economic goals is likely to continue to be undermined by the projected effects of climate change. Specifically, the predicted decline in Belg rains in south central and eastern Ethiopia are expected to reduce harvests and result in the reduced productivity of rangelands during the summer and early autumn²². Collectively, the projected effects of climate change are expected to decrease food security and result in costs exceeding 10% of Ethiopia's GDP by 2045²¹.

Currently, Ethiopia's farmers and agro-pastoralists have insufficient capacity to adapt to the effects of climate change. Consequently, Ethiopia is at risk of not achieving its socio-economic goals . In particular, the agricultural sector has been identified as being vulnerable to climate change²⁶, with smallholder farmers and agro-pastoralists identified as being the most vulnerable of Ethiopia's population . Ethiopia's National Adaptation Programme of Action (NAPA) identifies climate vulnerabilities that include inter alia: i) great dependence on rain-fed agriculture; ii) insufficient water resources; iii) low adaptive capacity; iv) insufficient institutional coordination; and v) limited awareness of climate change and adaptation²⁷. The proposed LDCF project is responsive to the NAPA priorities in that project activities will contribute towards greater food security as well as support diversification of livelihoods through promotion of: i) climate-smart agricultural practices; ii) improved irrigation practices; iii) improved catchment and rangeland management; and iv) diversified livelihood options (e.g. beekeeping, small ruminant husbandry, fruit and vegetable production).

The GoE is implementing the CRGE Facility which will act as the organising agency for climate change related projects in Ethiopia. The proposed LDCF project will build on the baseline initiatives and programmes outlined below to strengthen the flexibility of design for resilience to climate change, capacity development in order to promote community-led initiatives and upscaling.

Baseline Projects

There are several baseline initiatives that the proposed LDCF project will build on and closely coordinate with to effectively achieve its results, building climate resilience into these initiatives. The projects outlined below are potential co-financing projects for the proposed LDCF project.

Second Agricultural Growth Project (SAGP)

Total budget: US\$350 million; estimated co-financing: US\$27 million

2015–2020

Funded by the World Bank and implemented by the Ministry of Agriculture (MoA), the SAGP has the main objective of "increasing agricultural productivity and commercialisation of smallholder farmers". SAGP is being implemented in four regions, namely Oromia, SNNP, Amhara and Tigray. The five components of the

SAGP will: i) increase access to public agricultural services for smallholder farmers; ii) increase the supply of demand driven agricultural technologies; iii) increase access to – and efficient use of – irrigation water by smallholder farmers; iv) support the development of value chains to commercialise smallholder farming enterprises through increased access to markets; and v) strengthen project management, capacity building and monitoring and evaluation. The success of the SAGP – particularly through Component 4 – is underpinned by productive agricultural practices. However, the effects of climate change are likely to reduce the productivity of traditional agricultural practices in Ethiopia. The proposed LDCF project will promote the implementation of agricultural and agro-pastoral measures for climate change adaptation (see Outcome 2). Therefore, this proposed LDCF project will build on the activities of the SAGP – specifically in Oromia, SNNP and Tigray – to enhance the ability of both highland and lowland farmers and agro-pastoralists to adapt to climate change, and maintain agricultural productivity under the future conditions of climate change.

CCA Growth: Implementing Climate Resilient and Green Economy plans in highland areas in Ethiopia

Total budget: \$6,277,000

2017 – 2022

The objective of the project is to mainstream climate risks into national and sub-national planning processes thereby increasing the resilience of local communities across the Ethiopian highlands to climate change. These will be achieved through three outcomes as follows: Outcome 1 will build capacities enhanced for climate-resilient planning among communities, Woreda, regional and federal government. Outcome 2 uses climate information for climate risk management strengthened – including for women and youth. Outcome 3 supports adapted and diversified income and employment opportunities generation for local communities, with a focus on climate-smart agriculture and integrated watershed management. The project will target communities in eight Woredas (Dessie, Dawa Chefe, Yaya Gulele, Sebeta Awas, Hawassa, Arba Minch, Atsbi Wenberta, Tahtay Koraro) across four regions (Amhara, Oromia, Tigray and the Southern Nations, Nationalities and Peoples' (SNNP) Region).

Capacity Development for Strengthening the Drought Resilience of the Pastoral and Agro-pastoral Population in the Lowlands of Ethiopia programme (CDAPLE)

Total budget: US\$11.25 million; estimated co-financing: US\$2 million

2013–2018

Funded by GIZ on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ), the CDAPLE programme is being implemented by the MoA in the Afar region. The main objective of the programme is strengthening the drought resilience of pastoralists and agro-pastoralists by increasing access to natural resources such as water, agricultural land and rangelands. Specifically, CDAPLE activities include: i) planning land use jointly with all users and authorities; ii) conserving soil and water; iii) improving pastures; iv) safeguarding migration corridors for herds; and v) promoting income-generating measures such as the fattening of sheep and goats. Although CDAPLE is focused on increasing drought resilience, the effects of climate change on communities in the Afar region – such as reduced yields of fodder crop – are not adequately addressed. The proposed LDCF project will build on CDAPLE by: i) promoting climate resilient planning (see Outcome 1); and ii) supporting the development of adaptive livelihoods (see Outcome 2), including increasing the use of climate resilient fodder crops.

Climate Smart Integrated Rural Development Project in the Pastoralist area of Ethiopia

Total budget: US\$4,256,485 USD

1919-2021

The project is funded by the Government of Italy, with the objective of the project is to manage the risks from recurring droughts, floods, both from current risks and under future climate change - through an integrated water, agriculture and natural resource management approach. This is complemented with a

climate resilient livelihoods diversification programme. The programme is targeted in climate sensitive and vulnerable pastoralist areas of Ethiopia. Afar(two Woredas) and Oromia (Two Woredas) Regional States

Integrated Landscape Management to Enhance Food Security and Ecosystem Resilience in Ethiopia

Total budget: \$ 10,339,450

2017-2021

This GEF-funded project proposes an integrated approach that brings together capacity to achieve food security with the need to restore and sustainably manage key environmental resources. It does this through three interrelated components: Component 1 ensures effective multi-stakeholder platforms are in place to support the dissemination and uptake of integrated approaches; Component 2 develops specific approaches and puts in place effective mechanisms to scale up across target sites and, more widely, in the country; and Component 3 establishes a systematic monitoring, assessment, learning and knowledge management mechanism that supports influencing at a wider scale in Ethiopia – and via the Regional Hub project– across other SSA countries under the IAP. Infusing all components is a commitment to gender-responsive development, in which women stakeholders within smallholder communities play a central role in economic and environmental transformations.

3) Alternative scenario

The objective of the proposed LDCF project is to promote the design and implementation of adaptation interventions to address the climate vulnerabilities of local communities at scale across Ethiopia. It will upscale successful project experiences of GEF's community-based adaptation projects in Ethiopia and apply integration and innovation approaches for transformational impact. Integrated planning, application of drones and GIS data based planning, digital technology, private sector business models, micro-finance, community entrepreneurship and risk insurance will be considered in the project. The project will focus on 18 rural woredas and two peri-urban areas/cities to support integrated adaptation in the selected regions.

The proposed project will take place in a total of nine regions from which the specific woredas and urban areas will be selected during the PPG phase^[1]. The selection of the urban areas will be done so as to address urban vulnerability associated with both the linkages between urban and rural areas as well as rapid urbanization that increase the vulnerability of urban communities. As the proposed project is an upscaling of earlier GEF projects, it will be implemented in additional woredas and kebeles not currently covered by these projects. These include sites in Benishangul, Gambella, Oromia and Tigray regions, as well as localities in the additional regions of Afar, Amhara, Harari, Somali and the Southern Nationalities, Nations and People's Region (see Figure 1 in section 1b. below). At each site, participants will be supported to plan and implement integrated adaptation actions tailored to their local environmental and socio-economic contexts. The proposed project will upscale the interventions piloted in the earlier projects to these additional woredas and kebeles by promoting best practices and lessons learned from that initiative. It will also introduce approaches and technologies that enhance the uptake and sustainability of these interventions. Some of the most successful adaptation practices that have been demonstrated through the earlier projects that will be scaled up under this proposed project include:

- climate smart agricultural practices i.e. moisture conservation and "row planting";
- rainwater harvesting for use in small scale irrigation practices;
- solar pumps and the use of underground water for small-scale irrigation practice;
- night storage tanks and the use of distribution canals for small-scale irrigation;
- production and the use of energy efficient stoves;
- water and shade management i.e. area closure and tree planting practices;

- improved weather information dissemination;
- weather index-based crop insurance scheme;
- apiculture;
- diversified income generating activities i.e. small ruminant, fruit and vegetable production; and
- introduction of large yielding, drought resistance and early maturing crops.

The project will apply this in a landscape approach that enables local communities to map and understand their broad environments and how the natural assets and ecosystems connect with different land use systems using dynamic GIS applications and drones in participatory planning processes. Livelihood diversification schemes will be addressed in a value chain system that links sustainable production with processing and marketing. The private sector will be actively engaged in delivery of the different technologies climate information to local levels as well as in insurance schemes. The private sector will be actively engaged in shaping these interventions at the PPG phase. It is expected that this approach will increase the autonomous uptake of interventions through private and public channels, with the project playing a catalytic role in the process. This approach will also enable the project to address urban climate change vulnerability in areas where strong rural-urban linkages make urban communities highly vulnerable to climate change, with negative feedback loops to both rural and urban livelihoods and also the natural environment that especially peri-urban communities depend on for their livelihoods.

To achieve the project objective, the following results will be delivered through four integrated components, with knowledge management and gender cutting across all the four components.

Component 1. Regional and local institutional and technical capacity development for coordination and climate mainstreaming

Outcome 1. Strengthened institutional and technical capacity for coordination of climate-resilient planning and investment

This outcome will embed climate change adaptation in the local level institutional structures and processes in order to achieve systemic impact that ensure specific adaptation practices, technologies and climate information are part of development business. Its focus will be on the regional and local institutions that play a pivotal role in actualizing national climate change frameworks, ensuring that national commitments are implemented. It will strengthen institutional and technical capacities for planning, monitoring and evaluating climate change adaptation for farming and agro-pastoral sectors. Capacity building efforts will focus specifically on the inclusion of climate risk management and climate change technologies into local level plans. A series of training workshops will be provided to policy- and decision-makers in the targeted *woredas* and cities on gender-responsive approaches to adaptation planning, and on the inclusion of climate change information in the development and implementation of local plans and investments. The project will also identify and promote private sector-driven activities. During the PPG phase, specific regional-, *woreda*- and *kebele*-level training needs will be identified, as well as the likely training service providers. Training themes will be based on training provided under the earlier projects, and will include: i) gender-sensitive, participatory, climate vulnerability and risk assessments; ii) landscape-level approaches to gender-responsive climate-resilient planning, including undertaking agro-ecological assessments; iii) interpretation of climate scenario modelling; and iv) costing and prioritising adaptation interventions. The training will be complemented by the development and dissemination of tools and methodologies for integration of climate information on climate vulnerabilities as well as priorities for adaptation into planning and budgeting processes. This will largely comprise promotion of tools and training already developed, e.g. area-based vulnerability mapping, assessment of climate vulnerabilities, prioritisation of adaptation options, and climate-smart development planning as well as climate-resilient city and landscape planning tools. The project will then support the application of these tools and training in the development of climate change adaptation/disaster risk reduction plans at the regional and local levels for key sectors, as well as at the city level in four targeted cities. These plans will include gender-specific adaptation needs – based on the results of vulnerability and risk assessments – and will be premised on inter-sectoral collaboration to ensure climate-proofing of existing development plans.

The project will support the evaluation of national, regional and local level policies, strategies and plans (including investment plans) to identify entry points for integrating climate change adaptation thereby ensuring that adaptation is part of broader development processes. Tools for evaluating these national and local plans and policies, and integrating climate change adaptation will be developed and made available to national level and local government planning institutions. The capacity of planners and technical institutions to use these tools to mainstream climate change will also be enhanced, in conjunction with the outputs of integrated landscape management. In the process, woreda level focal points to lead the mainstreaming of climate change adaptation will be identified and provided with targeted training for coordinating the mainstreaming of climate change adaptation. In addition to local government actors, the project will also provide training to strategic leaders of line Ministries represented at the local level to ensure alignment and consistency between local level and national level mainstreaming efforts. During the PPG stage, the strategic national level plans and policies to be evaluated for mainstreaming will be identified and prioritised.

Broader systemic impacts will be realized through the inclusion of private sector representatives in capacity building and awareness activities so that climate change risks and adaptation measures are included in their business strategies and investment plans, as well as highlighting the business opportunities available through climate change adaptation.

Component 2. Access to climate-smart technology

Outcome 2. Access to climate-smart technologies and practices for cost-effective adaptation is enhanced

Under this outcome, access to climate-smart technologies and practices that improve the range and efficiency of adaptation options will be enhanced. These innovative adaptation technologies will be drawn from lessons learned and best practices – as well as indigenous and traditional knowledge – identified and promoted under the earlier GEF projects. Such lessons learned and best practices will be collated for sharing used for informing adaptation practices under this outcome.

Decision-makers and technical staff will be trained using a “training-of-trainers” approach on the implementation of adaptation technologies that are suited to local socio-economic and environmental conditions, taking into account observed and expected climate change impacts as well as the specific vulnerabilities of different population groups such as the differentiated needs of men and women in adapting to climate change. The specific adaptation technologies that will be covered in the training will be drawn from the successful approaches demonstrated by the earlier projects. Technical staff from key sectoral ministries and local government institutions will also be trained on using downscaled climate data and forecasts to inform the selection of appropriate adaptation measures at the community level. The project will then support the production of fine-scale, localised weather and climate advisories to be disseminated to local communities through appropriate communication channels and in local languages. These advisories will comprise information on weather forecasts, warnings on potential climate impacts and data compiled from previous seasons for comparison. Based on these advisories, informed decisions can be made regarding appropriate actions to be implemented for the coming seasons. Dissemination of these advisories will allow for informed decision making by local level government staff as well as vulnerable rural communities on action to reduce their exposure to climate change impacts.

At the community level, training will be provided to local farmers and community members on how to apply the information that they receive from downscaled climate data and short-term/seasonal forecasts to guide their day to day agricultural activities. This training is important for the sustainability of the process from one season to the next. Climate information is disseminated to communities and then needs to be interpreted to determine what climate-smart adaptation measures to implement for the coming season. Training will cover the interpretation of this climate information in a practical example by using analogue years for comparison to effectively inform decision-making for these techniques. The farmers will also be trained on the adoption of climate-smart agricultural practices and other adaptation technologies documented under this outcome. The adoption of climate smart agriculture techniques presents

opportunities for communities and individuals to diversify livelihoods. Receiving climate information will allow for alternative livelihood options to be pursued based on expected climatic conditions. The training of farmers and community members will draw from the lessons learned and successful approaches demonstrated under the PAA project.

The project will support the demonstration of the adaptation technologies in targeted woredas and cities to foster a “learning-by-doing” approach. Decision-makers and technical staff will thus be supported to apply their training in identifying climate change impacts and implementing adaptation interventions to address those impacts. Similarly, farmers will be supported to apply their training on using acclimate data and advisories as well as innovative adaptation practices in diversifying and adapting their livelihoods in response to climate change. Examples of innovative adaptation technologies as well as adaptive approaches demonstrated through the PAA project to be promoted through this outcome include:

- improved agricultural techniques such as compost making, zero tillage, permaculture and moisture conservation;
- provision of improved crop varieties for greater productivity under extreme climate variability;
- diversification of crops, agro-forestry, row planting and inter-cropping;
- ecological restoration of degraded watershed areas to restore ecosystem functioning and improve hydrology, including urban landscaping, tree planting and catchment management for flood risk reduction;
- improved irrigation technologies that are more water and energy efficient, and rainwater harvesting for small-scale irrigation;
- improved management of pastures and rangeland; and
- diversified livelihoods both in woreda and urban areas (including practices such as apiculture and small ruminant husbandry – these will be further examined during the PPG study).

In addition to the production-side approaches, the project will link farmers to markets to enable them to fetch better prices for their products to make the adaptation interventions more holistic and integrated.

Finally, the project will introduce to models and partnerships for with the private-sector including local entrepreneurs for driven adaptation technologies, practices and climate information dissemination developed with participation of private sector (including local entrepreneurs. Through dialogues with companies in the insurance and communication sectors, options for dissemination of climate information as well as for climate risk insurance will be introduced to communities. Feasibility studies will be undertaken in collaboration with potential service providers while awareness and training for communities will be undertaken on these. The project will also facilitate the involvement of Ethiopian based companies in making agricultural value chains resilient, and to supply the technologies for adaptation such as solar powered irrigation pumps and climate resilient seed varieties.

Through implementation and up-scaling of the above best practices, the proposed project will directly benefit around 225,000 community individuals.

Component 3. Integrated landscape management

Outcome 3. Community and institutional capacity for integrated landscape management enhanced

Under this outcome, technological and participatory approaches will be used to promote landscape level resilience building beyond specific adaptation practices introduced in Component 2 by building the capacity for integrated landscape management. This is premised on the fact that climate resilience is a factor of a combination of the natural and human assets and functions that are connected at landscape level. Functional landscapes may cut across the administrative boundaries defined by Woredas. By introducing this component, the project will promote the scaling up of climate change adaptation to the landscape level. This will connect the flow of ecosystem goods and services across landscapes, their values, the influence of the land use patterns on these goods and services as well as the influence of the specific decisions and actions made at household, kebele and woreda levels. These layers of decision

making will need to be aware of the long term value of maintaining the quality of the different assets for resilience building. While productive adaptation practices such as climate smart agriculture enable communities and households to improve or maintain land productivity, the quality of entire landscapes, including catchments, grazing lands, woodlands, settlements and others support long term resilience that make specific practices effective and sustainable. Thus integrated landscape management will be introduced as a way of managing the landscapes that bring together multiple stakeholders, who collaborate to integrate policy and practice for their different land use objectives, with the purpose of achieving sustainable landscapes. Integrated landscape management has been recognized as one approach to addressing the major global challenges of poverty, food security, climate change, water scarcity, deforestation and loss of biodiversity at the local level. By managing the underpinning natural resource base and ecosystem services in a coordinated way, the needs of people, communities and governments can be met in the short and long term.

The project will therefore use existing or set up new platforms (where non-exist) for integrated landscape management, with each platform including stakeholders from different woredas. It will facilitate and build the capacity of local stakeholders (communities, businesses, community leaders and government institutions) to map their landscapes, visually connect their landscape functions to identify landscape wide human and natural systems, their quality and values and make decisions that connect their needs and the functions of their landscape. Using Unmanned Aerial Vehicles (UAVs) – or drone and GIS technologies in a participatory environment, the project will introduce interactive mapping, monitoring and valuation for integrated landscape management and support practices in a multi-stakeholder environment. Through this process, stakeholders in each landscape will identify the critical land use attributes (human and natural) and their functions that need to be maintained and taken into account in decision making. The project will also build their capacity to periodically monitor the changes taking place on the landscape using these high resolution technologies. The outputs of this process will include stakeholder collaboration in landscape management as well as a suite of management practices that need to be undertaken to maintain the functions of the landscapes, restore degraded parts of the landscape and sustainably use those under different forms of land use. This will be fed into Woreda and regional planning processes.

In addition the project will document the lessons learnt from this process as well as the principles for integrated landscape management for climate resilience for wider use by government institutions working at local level. This will be fed back into the activities under Component 1 of this project. Manuals for integrated landscape management will be developed and disseminated widely beyond the project areas.

Component 4. Livelihood diversification

Outcome 3. Gender-responsive options for alternative livelihoods transferred to communities to build resilience and reduce climate change vulnerability

Under this outcome, options for alternative livelihood support and income generating activities will be developed and implemented with a focus on women and youths thereby reducing their vulnerability to the impacts of climate change. Working with NGOs and building on existing local level economic development and diversification programmes, the project will develop training programmes for youth and women's organizations that focus on climate resilient income generating activities. It will build their skills in entrepreneurship, climate compatible business development, management and leadership. Established private sector entities will be drafted into the training programmes to provide practical guidance and mentorship to the beneficiaries and link these activities to their supply chains. The project will support trained beneficiaries to start enterprises in areas such as beekeeping, small ruminant husbandry, fruit and vegetable production among others, including ensuring that quality of products and services by the beneficiaries meet targeted market standards.

Woreda level centres for innovation, investment and marketing will be set up, bringing together beneficiaries of the training programmes above, private sector players and investors to develop and incubate business ideas that enable local communities to diversify their livelihoods away from climate-sensitive sectors. Opportunities for product value addition and improving efficiencies along new and existing value chains will be identified and developed into small scale

business and investment plans for trained beneficiaries with a focus on women and youth organizations. This includes opportunities for the supply and maintenance of technologies introduced under Output 2. This will ensure that the technologies that the project introduces as adaptive measures will be locally supported through viable business models and also to reduce long term costs of maintenance that would otherwise depend on expertise coming from outside communities.

4) Additional cost reasoning and co-financing

The GEF-supported alternative scenario will address community vulnerability issues in additional woredas not covered by previous projects. These woredas are one of the most vulnerable in the country and without additional GEF LDCF funding their vulnerability issues will remain largely unaddressed. . A range of constraints limits the scaling up of past successes and experiences on its own in other regions. This include specific local vulnerability challenges . which require different approaches, subsistence nature of communities to implement new solutions on their own and limited capacity and integration across government institutions to scale up solutions. The project will adopt integration approaches, apply innovation in planning and technology solutions and engage local institutions, community entrepreneurs, private sector companies, and global institutions more systematically to create a multiplier effect for the new LDCF investment.

The detailed additional cost reasoning is provided for each outcome below.

Strengthened regional and local institutional and technical capacity development for coordination and climate mainstreaming

At present, institutional capacities for co-coordinating climate resilient planning and investment at the national, sub-national and city levels in Ethiopia remain inadequate for addressing climate change risks. Under a business as usual scenario, programmes and initiatives for promoting adaptation actions will continue to be ineffective when compared to potential benefits to be gained from integrating climate change adaptation into development planning. National and sub-national institutions as well as urban planners would remain unable to ensure climate-smart development planning that would contribute to climate resilience of urban and rural communities. Ongoing efforts will also remain inadequate in addressing gender-specific vulnerabilities to climate change, leaving women at risk to climate-related disasters and other climate change impacts.

With LDCF intervention, institutional capacities for supporting climate risk management and adaptation will be strengthened. The proposed project will support the development of gender-sensitive tools for decision-making on the integration of climate change adaptation into planning processes. This will be complemented by training on the application of these tools to inform gender-responsive adaptation planning. Planners at the regional, city and local levels will be supported to formulate development plans for key sectors that incorporate climate information and explicitly outline adaptation options to address climate risks. This outcome will thus strengthen the enabling environment for integrating climate risks and adaptation measures into development planning and budgeting processes to support the building of adaptive capacity climate resilience at all levels. The project interventions will have a specific focus on gender-responsive adaptation measures, taking into account the differentiated vulnerabilities of men and women to climate change impacts. Development planning will thus focus specifically on building the climate resilience of women through providing targeted and gender-specific adaptation benefits.

Access to climate-smart technologies and practices for cost-effective adaptation is enhanced

Under a business-as-usual scenario, farmers in Ethiopia will remain unable to build their adaptive capacity to cope with climate change impacts. While new climate-smart technologies and practices – like climate information systems and climate-smart agricultural practices – have been developed in the country and elsewhere, communities do not generally have access to knowledge concerning these technologies/practices. Such communities will thus remain

unaware of the potential for new technologies and practices to provide adaptation benefits that will address their climate vulnerabilities. The lives and livelihoods of these communities will thus remain at risk to current and predicted impacts of climate change.

Furthermore, farmers in Ethiopia will remain unable to use climate and weather data and advisories to incorporate knowledge of climate risks into their agricultural practices in an on-going manner. At present, these farmers do not receive timely and accurate information on short- to medium-term weather conditions that would inform the timing of agricultural activities such as planting and harvesting. Moreover, this lack of information constrains local-level institutions such as cooperatives and micro-finance institutions from being able to offer risk reduction products such as insurance. Instead, the uncertainty results in considerable financial risks that make such products financially unavailable. Where such products do exist, insurance premiums are generally too expensive to be feasible for local farmers.

With LDCF intervention, training will be provided to technical staff in relevant ministries and government institutions – such as the Ministry of Agriculture and Natural Resources (MoANR), the Environmental Protection Authority (EPA) and the National Meteorological Services Agency (NMSA) – on producing and disseminating climate advisories and forecasts to inform adaptation planning at the community level. This will include generation of climate advisories from raw data as well as packaging and disseminating this information in a manner that makes it practically usable by farmers to inform their day-to-day agricultural activities. Existing platforms for information dissemination will be built upon to include weather advisories as a service to local farmers. Farmers will then be trained to incorporate the information from these advisories into their agricultural practices. This training will be complemented by the implementation of climate-smart agriculture in targeted woredas, including planning and implementing gender-specific adaptation responses based on the fine-scale, localised information that they receive from the downscaled climate advisories.

In addition, LDCF resources will be used to enhance access to state-of-the-art technologies and practices for climate change adaptation. Innovative technology from international case studies as well as indigenous/traditional knowledge will be documented and the information made available for decision-makers and technical staff – in institutions such as MoANR, EPA and the Ethiopian Institute for Agricultural Research – as well as for local communities, CBOs, woreda councils, kebele administrations and other local level stakeholders. Training will be provided on the use of innovative adaptation technologies that are tailored to local contexts and that provide tangible benefits, with a focus on addressing the differentiated vulnerabilities of both men and women. Moreover, the innovative approaches will be piloted in targeted woredas to support practical learning through implementation of adaptation measures. This will promote proactive adaptation action being undertaken by communities, reducing the dependence on the GoE for supporting adaptation and resilience building. In this way, the risks posed by climate change to the lives and livelihoods of local communities will be reduced, enhancing sustainable and climate-resilient development.

The adaptation interventions, especially in agriculture will be implemented in additional woredas not covered by previous projects. The project will combine adaptation solutions with livelihood and value chain based solutions so that they are not stand alone. Thus, the resultant adaptive capacity and resilience that the project builds in the additional communities is greater than when the agricultural adaptation solutions are introduced in isolation.

Community and institutional capacity for integrated landscape management

Under the business-as-usual scenario, adaptation interventions focus on actions by households on a small scale, and follow a single sector approach e.g. agriculture and on isolated land uses, disregarding the decision effects of decisions and actions made through other sectors on the use of land. This often leads to fragmented interventions that do not take into account the inter dependencies of land and resources uses and functions across larger landscapes that are beyond the influence of individual farmers or institutions. Decisions on the use of land and resources in one area of the same landscape could undermine the adaptive base of the entire landscape, rendering individual interventions and technologies unsustainable in the long term. Additionally,

business-as-usual scenarios do not afford local stakeholders access to technologies to support their decision, with tools such as GIS and technologies such as drones often unavailable to them, and left a reserve of specialised government departments or experts. Yet these technologies are now available to support adaptation.

This project is a big step towards integrated approaches for climate change adaptation in Ethiopia, and connects agricultural and ecosystem based approaches for adaptation. With LDCF interventions, a broader approach to adaptation that takes into account interconnectedness of landscapes, the value of different ecosystem goods and services as adaptive assets will be recognized and taken into account by users of the same landscape. Most importantly, stakeholders who have different uses of land and resources, and who make decisions on land use and land allocation will be able to work together and develop decision tools and principles that ensure that the landscape continues to play its role as an adaptive asset. LDCF resources will provide the technologies and transfer expertise for the different stakeholders to undertake these processes. The interventions will also allow them to make decisions on the use of the land with a broader perspective, taking into account the likely impacts of climate change on the entire landscape. This includes areas on the landscapes that need protection or rehabilitation, and identification of programmes or policies, including settlements that may negatively erode the adaptive base of the different woredas.

The technologies and methods that the LDCF project introduces enable the stakeholders to visually connect with large areas of land and decisions that would otherwise be beyond them without the project. It also facilitates communication and collaboration beyond political boundaries as they follow functional landscapes. The participatory approaches makes the interventions more accessible to different members of the community.

Gender-responsive options for alternative livelihoods transferred to communities to build resilience and reduce climate change vulnerability

The business-as-usual approach limits interventions to those activities that address the direct impacts of climate change and variability such as water, soil, crop and livestock management within the sectors directly affected without diversifying the options available to communities, especially the most vulnerable groups. This has a limited impact the adaptive capacity of communities and households who may continue to depend on those climate-sensitive sectors. At the same time, the opportunities afforded along value chains as alternative sources of income are often not pursued under business as usual approaches.

LDCF financing will widen the adaptive base of beneficiary communities by giving them livelihood options outside climate-sensitive activities, beyond food production and along value chains. These options will enable them to generate additional income, with a focus on the most vulnerable groups such as women and youths. The proposed project will reach out to those vulnerable communities in urban areas who have limited assets for adapting to climate change. LDCF funding will also link livelihood diversification with the technologies introduced by the project through the creation of enterprises that support these technologies locally. For instance, youths will be skilled to repair solar pumps and irrigation equipment, while women's organizations could be skilled to process and market local produce. This reduces the cost of beneficiaries having to depend solely on externally supplied skills and equipment in the long term. Furthermore, the involvement of the private sector enables beneficiaries to access additional business and technical skills, and could in the long term help channel investments towards the project areas.

5) Adaptation benefits

The proposed LDCF project is aligned with the following outcomes of the GEF focal area objectives:

CCA-1: Reduce vulnerability and increase resilience through innovation and technology transfer for climate change adaptation. The proposed LDCF project will support adoption and upscaling of international best practices as well as indigenous knowledge concerning climate-smart technologies (see Output 2.4). In addition, it will provide training to farmers on climate-smart agriculture, complemented by the promotion of climate-smart agriculture in selected *woredas* (see

Outputs 2.1 and 2.2). It will also diversify the livelihood options of beneficiaries that will build their adaptive assets (Outputs 4.2 and 4.3). Using the integrated landscape management approach, the project will support building of the natural assets key to adaptation (Outputs 3.2. and 3.3).

CCA-2: Mainstream climate change adaptation and resilience for systemic impact. The proposed LDCF project will promote the use of tools and methodologies for planning and implementing adaptation measures (see Output 1.1) as well as ensuring that climate change adaptation is integrated into local and national plans and programmes (see Output 1.2). It will also conduct training-of-trainers on the use of innovative adaptation technologies to enhance technical capacity for implementation of adaptation measures (see Output 2.1). In addition, the project will train local communities and institutions in integrated landscape management (Output 3.1) and to develop viable alternative livelihood options (Output 4.1).

6) Innovation and sustainability

The proposed LDCF project activities will be innovative in the context of the targeted woredas and cities. Specifically, the use of climate-smart technology and agricultural practices will be novel to communities that do not fall under the scope of the PAA project currently under implementation. Such innovative approaches to farming and agro-pastoralism will be introduced to local communities and training provided on the selection and application of such methods. The project will also support identification and application of innovative approaches to climate change adaptation for inclusion in planning by both local communities and government decision-makers. The project will introduce landscape level integrated management that goes beyond specific farm level practices thereby building larger scale resilience. It will introduce applied technologies such as UAVs and GIS that enable multiple stakeholders to directly interact with each other and visually understand their environment for better decision making. Finally, the project proactively involves the private sector and civil society in the delivery of the its outcomes.

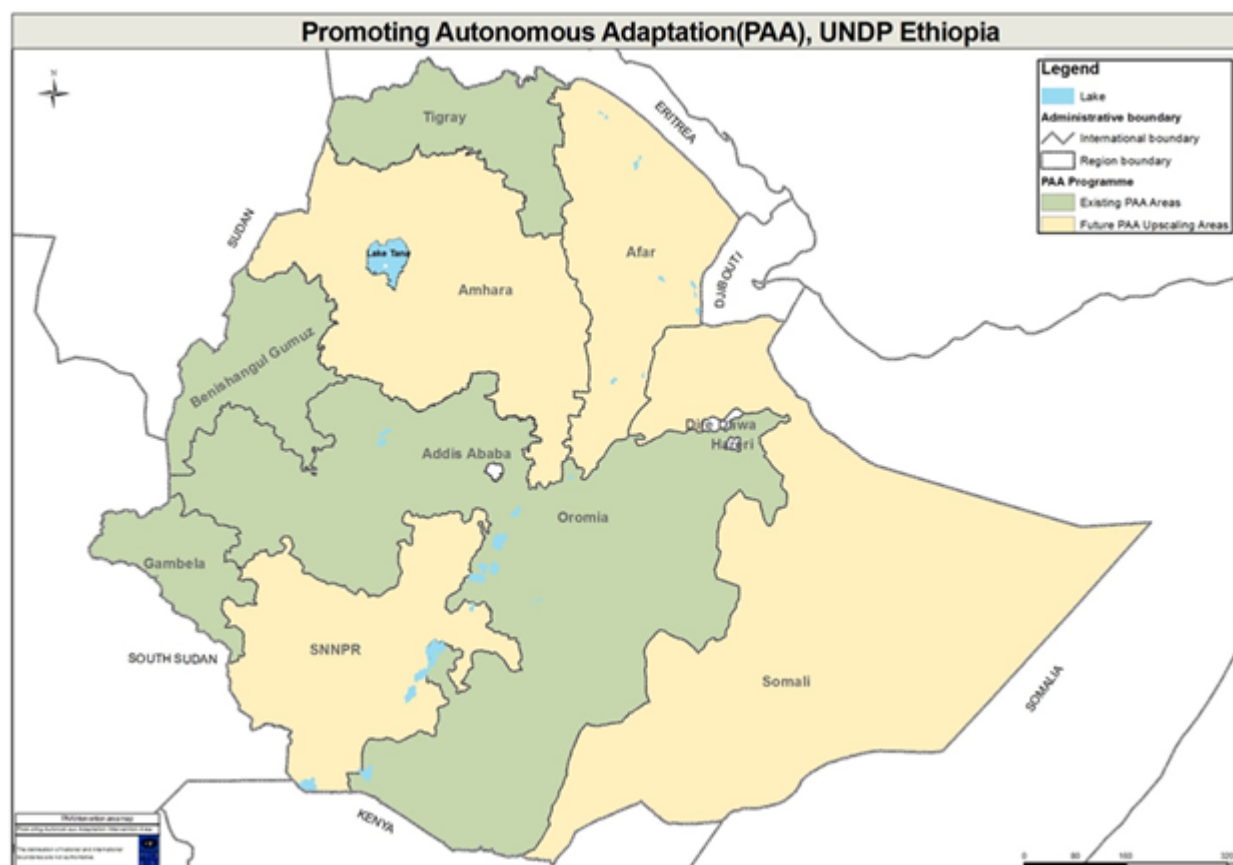
Project sustainability will be achieved by bestowing ownership of the project and its activities to government and local authorities and ensuring wider participation by different stakeholders who will continue operating in the project areas beyond GEF funding, including local NGOs. The project management structures will also be designed to ensure ownership even after project funding, by using as much as possible existing institutional structures rather than creating new ones that solely serve this project. To ensure continuity, project activities will be aligned to existing plans and programmes especially at the woreda level so that they are part of long term strategies that will continue after the project. In the same way, community and farmer level solutions will be aligned with the needs of the beneficiaries so that they are part of the community and household livelihood strategies. As part of mainstreaming, the project will promote and advocate for inclusion of certain activities that need support to be included in budgets, such as inclusion of adaptation activities in the work of extension workers, and monitoring of progress beyond the project. The tools for monitoring adaptation will be made part of the monitoring tools of local institutions rather than stand-alone tools. In the same manner, the monitoring tools of line ministries operating at the district level will also be reviewed to include climate change adaptation, especially those in agriculture. The involvement of the private sector and the building of local business skills enables the project interventions to be taken up beyond the external financing of the project.

1b. Project Map and Coordinates

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

The project sites will be located in Benishangul, Gambella, Oromia and Tigray regions, as well as localities in the additional regions of Afar, Amhara, Harari, Somali and the Southern Nationalities, Nations and People's Region (see Fig. 1 and Table 1 below). Specific site location will be determined during the project preparation phase.

Table 1: Geo-referenced information for project intervention areas



Region	geonames.org ID	Brief description
Benishangul	444181	Administrative division
Gambella	444183	Administrative division
Oromia	444185	Administrative division
Tigray	444187	Administrative division
Afar	444179	Administrative division
Amhara	444180	Administrative division
Harari	444184	Administrative division
Somali	444186	Administrative division
SNNPR	444188	Administrative division

2. Stakeholders

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

Indigenous Peoples and Local Communities Yes

Civil Society Organizations Yes

Private Sector Entities

If none of the above, please explain why:

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

The involvement of policy makers and multiple stakeholders with distinct roles and responsibilities is integral to the success of a multi-focal approach. During the National Dialogue, both government and civil society were involved in refining the focus of the project, leading to the current set of project components. This provided a basis for expanded involvement of a wider range of national and sub-national stakeholders during the PPG stage.

The proposed LDCF project will be designed and implemented using a participatory approach that targets all stakeholders at the national and local levels to inform the design of the project, get their buy-in and their roles in implementation. A structured approach will be adopted where initially, detailed mapping of all stakeholders will be undertaken, followed by a stakeholder engagement plan for the PPG. This will also include the validation for all major activities. During the PPG phase, representatives of government ministries, civil society, NGOs, local communities, universities and the private sector will be consulted. Inputs from these stakeholders will be incorporated into the design and validated during a national consultation workshop to ensure the project responds to the particular needs of its beneficiaries.

To ensure that the project is tailored to local needs, project activities will be designed according to *woreda*-specific requirements. At the *woreda* and city level, local government institutions, including local leadership (political and traditional) and community based organizations, will be engaged during the PPG phase to design the project. During the consultations, meetings for different stakeholder groups will be held, especially for those who are not catered for or cannot participate in existing fora.

In addition to consultations with government agencies at headquarters, the agencies present at the regional and *woreda* level will also be involved in the design and implementation of the project will include *inter alia* the Ministry of Environment, Forests and Climate Change, MoANR, the National Meteorological Services Agency and the Ministry of Water, Irrigation and Energy.

The main stakeholders in the project are local communities from each *woreda* and city targeted under this project. The traditional knowledge and specific priorities of the beneficiaries in these *woredas* and cities will be solicited during the PPG phase as well as during project implementation, and their views integrated into the proposed interventions. Particular groups to be consulted during the PPG phase will include *inter alia*: i) smallholder farmers and agro-

pastoralists; ii) women, particularly in female-headed households; iii) local enterprises, cooperatives and farmer associations; iv) youth; and v) vulnerable urban communities.

The same approach used in the design of the project will also be used in project implementation, where the focus will be on bestowing ownership of project activities with local communities, and ensuring that project technical personnel work closely with local institutions and local leadership. Decisions will be made through structures that involve project beneficiaries to ensure they meet their needs.

In addition to Stakeholders in Ethiopia, the project will also engage global stakeholders operating in the areas that the project focuses on, with the objective of providing a global knowledge benchmark for the project and also to use these as partners and platforms for knowledge generation and dissemination. Fora such as the Global Community Based Adaptation initiative that convenes practitioners annually to share best practices, working with global institutions such as the International Institute for Environment and Development, will be engaged. The project will also engage other stakeholders such as the Global Center on Adaptation, Global Resilience Partnership, InsuResilience, African Risk Capacity, Africa Adaptation Initiative, the African Development Bank's Adaptation Benefits Mechanism and initiatives such as the Participatory Climate Services for Agriculture. The engagement with these stakeholders will vary from simply sharing information to practical partnerships. During the PPG phase, these stakeholders will be informed about the project, while specific partnerships will be implemented during project implementation.

Stakeholder consultation during the PPG phase will be expected to support all outcomes. Overall, the objective of the consultation plan is to provide a framework to guide and promote two-way engagement between the key implementing partners. The main stakeholders are outlined below, however additional stakeholders will be included during the PPG phase.

<i>Stakeholder</i>	<i>Indicative roles and responsibilities</i>
Ministry of Environment, Forests and Climate Change	The MoEFCC is the National Focal Point for GEF in Ethiopia and the implementing partner. As such, it will play a key role during the PPG phase in coordinating the project development and formulation with UNDP. During implementation, the MoEFCC will be on the Project Board and will also participate in the implementation of activities such as knowledge sharing, development and dissemination of climate advisories, undertaking vulnerability and risk assessments, climate-smart management of ecosystems, and climate-resilient development planning.
Ministry of Agriculture	This ministry will be directly involved in the promotion of adaptation interventions under Component 2. Extension officers will be involved in the identification of innovative adaptation technologies and the provision of information on climate-smart agricultural practices to farmers. In addition, the extension officers will also support the dissemination of climate advisories to local communities, as well as their application thereof in planning agricultural activities depending on expected climatic conditions. The MoA will support the adoption of climate-resilient crop varieties as w

	ell as diversified cropping systems, and also deal with specific livestock issues, supporting communities to adopt climate-smart approaches to management of pastures and rangelands.
Ministry of Women, Children and Youth Affairs	This ministry will provide inputs into the adoption of gender-responsive adaptation measures. In particular, guidance from the Ministry of Women, Children and Youth Affairs will be essential in undertaking gender-sensitive vulnerability and risk assessments as well as the formulation and implementation of gender-responsive climate change adaptation/disaster risk reduction plans.
Ministry of Water, Irrigation and Electricity	This ministry will have an important role to play in supporting adoption of adaptation measures such as improved irrigation technologies. In addition, the ministry will be instrumental in the formulation of urban adaptation plans that include adequate provision of drinking water supplies to targeted cities.
National Meteorology Agency	This government institution will be involved in the generation of localised weather and climate advisories as well as the dissemination thereof. At the local level, NMA representatives will support to farmers, pastoralists and decision-makers to apply the information from the advisories in planning and implementing adaptation measures.
NGOs, Research institutions (universities, Ethiopian Institute of Agricultural Research, Ethiopian Development Research Institute)	Various research institutions will provide technical support for the promotion of deliberate and proactive adaptation within the Ethiopian context. This expertise will be used to link adaptation interventions to current management practices for building resilience and reducing vulnerability. Specifically, research institutions will: i) support gender-sensitive vulnerability and risk assessments; ii) provide information on best practices from global as well as local examples; iii) assist with knowledge sharing and training; and iv) support policy design and adaptation planning. Such institutions could include national and local universities as well as NGOs and other research institutions that already have a track record on conducting research on <i>inter alia</i> the economics of adaptation and associated policy analysis, such as the Addis Ababa University the Ethiopian Development Research Institute.
Addis Ababa city administration; community groups; <i>kebele</i> -level communities and farming households; regional and <i>woreda</i> staff; <i>woreda</i> administration; <i>woreda</i> agricultural office	Local communities will play a central role in project preparation. Communities will be the beneficiaries but will also have the opportunity to direct the implementation of project activities through prioritisation of adaptation measures and involvement in community-level planning. Similarly, city-, <i>woreda</i> - and <i>kebele</i> -level administrations will be involved in mainstreaming climate change adaptation into sub-national development planning at the appropriate scales, as well as design and implementation of associated adaptation measures.
Private sector actors	While the PPG phase will identify and co-opt the business sector into the project

Private sector actors

While the PPS phase will identify and co-opt the business sector into the project, players such as Ethiotel (the telecommunications company), insurance companies and others will be engaged from the beginning. Players in the technology sector will also be engaged and co-opted into the project as partners. Due care will be taken to ensure that local community interests and benefits as well as environmental values are safeguarded while working with the private sector.

3. Gender Equality and Women's Empowerment

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

In order to ensure that gender considerations are taken into account, specific efforts will be made to consult with women's groups and representatives at the various consultation workshops planned during the PPG phase of the proposed LDCF project. Vulnerability and risk assessments – particularly of households run by women – will be done to prepare a baseline and to capture the differentiated roles, needs and priorities of women and men in relation to the project objectives.

Initiatives that improve the sustainable management and rehabilitation of rangelands and agricultural livelihoods should improve the resilience of both women and men to climate-related shocks. Improvements should also create opportunities for building self-reliance. Given women's often particular vulnerabilities – for example: i) limited livelihood options; ii) restricted access to education and information services; and iii) insufficient means to recoup assets – to disasters and other climate change effects, it is critical to ensure that their roles, needs, priorities and contributions are considered in climate change responses. Engaging in both the informal and formal sectors, women form a central role in their communities as entrepreneurs and community networkers. As a result, women are integral in helping reduce and respond to climate change effects.

There are a number of constraints on women's resilience to the effects of climate change in Ethiopia, including inter alia: i) access to improved land management and production technologies; ii) access to water and energy resources; iii) finance availability; and iv) capital. Women farmers in Ethiopia are estimated to perform up to 75% of farm labour and represent ~70% of household food production, including post-harvest processing of cereals. Despite this contribution, women farmers have historically been marginalised from extension services and associated agricultural inputs. Female farmers are therefore ~35% less productive than their male counterparts as a result of reduced access to extension services and agricultural inputs, such as seeds and fertiliser²⁹. Female farmers are likely to be increasingly negatively affected by the impacts of climate change, particularly droughts and floods.

The proposed LDCF project will support more equitable decision-making through an increased involvement from local natural resource governance structures. In addition, project activities include the promotion of more efficient and climate-resilient practices that are sensitive to the needs and roles of women in agriculture. This involvement can result in building a solid platform for engaging with district service providers such as the woreda councils. During the PPG phase, preparations for livelihood diversification plans and climate change adaptation options specifically for Ethiopia will be adapted in a gender responsive manner. This gender-responsive manner will assist in identifying the climate risks, vulnerabilities, roles, needs, priorities and opportunities of all stakeholders within the identified communities, including both women and men. Such gender-responsive assessments encourage an equitable approach from the outset.

In alignment with the Ethiopian National Policy on Women, gender considerations will be mainstreamed into the project's activities to ensure that women are included in the selection of activities to increase their resilience and income-generation abilities. Detailed gender analyses will be conducted during the PPG phase to examine how gender relations influence access to natural resources, management of natural resources and how these relations are likely to influence the effectiveness of project implementation and achievement of results. In particular, the influence of gender relations on the equitable distribution of costs and benefits of the project implementation, as well as long-term benefits of the project will be explored in detail. Based on the findings, a gender strategy will be formulated.

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

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

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

generating socio-economic benefits or services for women. Yes

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

Yes

4. Private sector engagement

Will there be private sector engagement in the project?

Yes

Please briefly explain the rationale behind your answer.

The Ethiopia project is very explicit on the interventions that it will scale up, and the business components that will be scaled up are very clear i.e.

- Solar pumps and the use of underground water for small-scale irrigation practice
- Production and the use of energy-efficient stoves
- Weather index-based insurance scheme
- Provision of equipment and market linkage for apiculture
- Diversified income-generating activities: small ruminants, fruit and vegetable production
- High-yielding, drought-resistant and early maturing crop varieties

The technology-based interventions lend themselves directly to the supply value chain, ranging from ensuring that the technologies themselves are made locally available, and the skills for repairing and maintaining the installations are available on the local market in a way that minimizes the costs of bringing technicians from far away. In this regard, facilitating the building of technical and business skills will be an activity of the project, and linking these local entrepreneurs to external suppliers. The same applies to the income-generating activities that the project will support. These will be linked with skills for processing, packaging and supplying high value markets through business models that are sustainable.

A significant issue for the small-scale sector is financing. The project will link the beneficiaries with financing opportunities, while facilitating engagement with the financial services sector to explore models for financing local, climate-resilient and sustainable enterprises. The objective is to ensure that the income-generating activities that the project will promote will continue functioning and operate autonomously and will multiply on their own as local and external private sector seizes the opportunities that exist. The project will link beneficiaries with existing projects and organizations that are working on financing schemes for the micro, small and medium enterprises in Ethiopia.

The insurance sector is also an entry point for private sector involvement in this project. The project will engage the insurance sector on their role to develop and provide the right products for especially smallholder farmers. This will boost their own business. It will also explore options for communicating climate risk information to local farmers for them to be able to make the right decisions. It is expected that the insurance scheme will provide sustainable involvement of the private sector in climate adaptation beyond the project is the right products are made available.

5. Risks

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

<i>Description of risk</i>	<i>Degree</i>	<i>Mitigation measures/comment</i>
Severe drought or other extreme weather events occurring during the project implementation and affecting the project targeted communities.	High	The project interventions are designed to address the effects of increasing climate variability, such extreme weather events could negate project benefits. In addition, the PPG phase will be used to compile a n inventory of potential hazards with information provided by local communities and climate experts. This inventory will be incorporated into the design of <i>woreda</i> -level interventions. By targeting several <i>woredas</i> in different agro-ecological zones across the country, it is unlikely that all project sites would be simultaneously affected in case of a drought occurring. In addition, the formulation of drought risk management strategies (under Outcome 1) will occur as a priority during the first stages of project implementation, providing for the design of a daptation measures to reduce drought impacts as a first step towards building climate resilience while at the same time reducing the risk that drought will heavily impact on project activities.
Low human and institutional capacity, especially at <i>Woreda</i> level	Medium	The proposed LDCF project has a strong capacity building and training component, designed to promote effectiveness and sustainability at the <i>woreda</i> level.
Delay in project implementation	Medium	The PPG phase will support the regional administration to design capacity building programmes. Delays in projects often relate to capacity issues, which will be mitigated against.
Limited awareness and engagement with community leaders and local-level development practitioners leads to demonstration activities failing to influence climate-planning processes at local and regional levels	Low	Awareness raising and engagement will commence during the PPG phase and will continue throughout project implementation. This will focus on the importance of mainstreaming adaptation planning into development agendas of local communities and in relevant government administrations at the city-, <i>woreda</i> - and <i>kebele</i> -levels. Awareness raising will focus on risks posed by climate change to development priorities. In addition, information dissemination through regular publication of project newsletters and other media (e.g. videos for community screenings) will enhance awareness raising and engagement at the community level.

Political or security complications in project sites limit implementation of project activities	Low	There is strong commitment from the GoE, which limits these risks to the proposed LDCF project.
Poor co-ordination in project implementation	Low	Project management arrangements will be made explicit during the PPG phase. To ensure coordination is effective, the proposed LDCF project will competitively recruit one project manager, <i>woreda</i> -level site officers, finance experts and one climate change expert.

6. Coordination

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

Institutional structure of the project

The project will be implemented following UNDP's national implementation modality, according to the Standard Basic Assistance Agreement between UNDP and the Government of Ethiopia, and the Country Programme.

The **Implementing Partner** for this project is Environment Forest and Climate Change Commission (EFCCC). The Implementing Partner is responsible and accountable for managing this project, including the monitoring and evaluation of project interventions, achieving project outcomes, and for the effective use of UNDP resources.

The institutional structure comprises of the following:

NATIONAL PROJECT STEERING COMMITTEE: Project implementation will be overseen by the Project Board herein refer to as the National Steering Committee (NPSC), responsible for making management decisions for a project in particular when guidance is required by the Project Manager. The NPSC will be comprised of individuals representing the institutions at the national and regional levels, including: EFCCC (Co-chair); UNDP (Co-chair); Ministry of Agriculture and Natural Resources; Ministry of Finance and Economic Cooperation (MoFEC); National Meteorological Agency (NMA); Ministry of Water, Irrigation and Energy (MoWIE); Regional Representatives (one from each region), Disaster Risk Management Commission (DRMC), Ethiopian Biodiversity Institute (EBI), Ethiopian Wildlife Conservation Authority (EWCA), Ethiopian Environment and Forestry Research Institute (EEFRI), Ethiopian Agricultural Institute (EAI), Development Commissions from each region.

Woreda Steering Committee (WSC): The project will establish a Woreda Steering Committee (WSC) in each Woreda/City. The WSCs will regularly consult with relevant CBOs, farmer, pastoralist, women and youth groups, as well as landless women and youth to ensure that project interventions are benefiting all stakeholders. Each WSC will comprise: i) the Woreda Administrator (Chair of the WSC); ii) an EFCCC representative (Secretary to WSC); iii) a Woreda Project Officer (WPO); iv) a local university representative; v) local CBO representatives (including women and youth groups); vi) an CBO representative; vii) a representative micro finance institutions; and a sectoral representative from both from the Woreda and Kebele levels from the following technical government departments; and Cooperative offices.

The **Project Management Unit (PMU)** will be responsible for running the project on a day-to-day basis on behalf of the Implementing Partner and within the constraints laid down by the NSC. The PMU will be hosted within the EFCCC. It will comprise of the Project Manager, Deputy Project Manager, M&E Officer, Finance and Administration Officer and other support staff. At the Woreda level, there will be a Woreda Project Office run by a Woreda Project Officer.

The **Project Assurance:** UNDP provides a three – tier supervision, oversight and quality assurance role –involving UNDP staff in Country Offices and at regional and headquarters levels. Project Assurance must be totally independent of the Project Management function. The quality assurance role supports the Project Board and Project Management Unit by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are managed and completed.

This proposed institutional structure will be validated during the PPG phase in consultation with all lead agencies.

Past initiatives

The project will coordinate closely with ongoing initiatives as well as public, private and local community stakeholders that are – or have been – involved in the design and implementation of the ongoing initiatives listed below.

Managing Environmental Resources to Enable Transitions to more Sustainable Livelihoods Programme (MERET)

The MERET programme focussed on reducing food insecurity by restoring natural resources through integrated water resource management (IWRM). The programme operated in 72 woredas across five regions, namely Amhara, Oromia, SNNPR, Tigray and Somali. Local communities benefited from a food for work (FFW) system, whereby people received food provisions in exchange for their labour. This labour was normally used to: i) implement physical and biological soil and water conservation (SWC) interventions; ii) introduce small-scale irrigation; iii) maintain and construct roads; and iv) reforest degraded land.

The introduction of small-scale irrigation was considered a “breakthrough” that enabled local communities to start producing vegetables, particularly in areas where vegetable production had previously not been possible. Prior to the introduction of small-scale irrigation systems, vegetable production was not possible in most areas across all Ethiopian regions. The prices received through selling these vegetables was generally higher than the prices of traditional crops – such as maize and teff. Consequently, farmers generated larger incomes from vegetable production. As an example of the extent to which income has improved, an evaluation of MERET impacts showed that 66% of households stated they have “escaped poverty” over the last ten years. Additionally, the same evaluation showed that target communities have increased resilience to shock events – such as floods and drought – and engage in more preparation and coping strategies than non-target communities.

Following the success of the interventions, the MERET programme established demonstration plots with successful farmers to transfer knowledge and skills to other farmers. Local communities also developed an understanding that watershed restoration and sustainable land management (SLM) are critical for improving their livelihoods, as these measures conserve the water resources that support income-generating activities. By bringing national and sub-national decision makers from across Ethiopia together at demonstration plots, MERET project activities were gradually upscaled to larger areas, furthering watershed restoration across Ethiopia. MERET has phased out in Ethiopia as a result of a shortage of funding. The proposed LDCF project will build on the platform developed by MERET to expand the implementation climate-smart adaptation interventions across larger areas in Ethiopia.

On-going initiatives

Promoting Autonomous Adaptation (PAA) at the Community Level in Ethiopia (ongoing)

This UNDP/GEF project aims to support local communities and administrations at the lowest level of government to design and implement adaptation actions to reduce vulnerability and build resilience. The PAA project focuses on those communities that are particularly vulnerable in Ethiopia. The project is implemented in eight rural kebeles and one city administration across four regions by the Ministry of Environment and Forest in partnership with woreda Administration and Environment Protection Offices of Adamitulu Jido Kombolcha, Asosa, Enderta and Gambella. Through PAA measures in vulnerable communities, implementation of the project will support Ethiopia in increasing community resilience to climate change. The project has three integrated outcomes, namely: i) strengthened institutional capacities for coordinated climate resilient planning and investment; ii) improved access to technologies and practices that improve the range and efficiency of adaptation options; and iii) improved capacity for community-based climate change adaptation. A mid-term review of the PAA project identified best practices to improve livelihoods and for future implementation to be upscaled or replicated. A summary of recommendations based on each outcome is presented in the table below.

Barriers, recommendations and best practices identified for the PAA project by outcome.

Project outcome	Barriers, recommendations and best practices
Institutional capacities for coordinated climate-resilient planning and investment strengthened	<ul style="list-style-type: none"> · Inadequate awareness amongst community leaders, policy-makers and local community development practitioners leads to project activities being viewed as low priority rather than integrated into daily management activities. · Future opportunities should be provided for awareness raising during project design and preparation phase to mainstream adaptation planning into the development agenda of local communities and broader to government level. · A focus on the risks posed by climate change and how they relate to development priorities needs to be made integral to future initiatives supporting sustainable development. · Continuous capacity building activities should be undertaken throughout the lifespan of the project. Activities should specifically target the institutional level so adequate support can be provided on <i>inter alia</i> market access for agricultural produce produced from project beneficiaries. Capacity-building activities should also include training that is focused on RS/GIS. This training will assist with preparation and monitoring of climate impacts and responses of targeted communities. · Information dissemination and public awareness campaigns should be strategically strengthened through a bi-annual publication or annual project newsletter. This will enhance communication at the community level, which is critical to a project of this nature. · An efficient communications and knowledge management plan should be developed and implemented to ensure that best practices and knowledge generated from the project is documented and shared. This documentation should include video footage etc. for future projects or upscaling to implement the lessons learned from the project.
Access to technologies and practices	<ul style="list-style-type: none"> · Lack of strategic engagement to ensure long-term adaptation and upscaling of technologies is a barrier.

ces that improve the range and efficiency of adaptation options improved	<ul style="list-style-type: none"> · Innovative adaptation techniques and practices should be identified and implemented that enhance sub-national climate change resilience and improve adaptive capacity. · Communities should be involved in the adoption and rolling out of new technologies and practices at the outset of the project and with proper training. If this does not happen, there is a risk of maladaptation as communities use the technology incorrectly. · Gender differentiated capacity building is important for projects of this nature. Furthermore, making access to technologies gender sensitive is integral to project success. · Continuous consultations with <i>kebele</i>-level beneficiaries (especially farmers) are an efficient means for motivation throughout project implementation.
Capacity for community-based climate change adaptation improved	<ul style="list-style-type: none"> · Monthly summary reports work well for presenting weather data and forecasts for the upcoming two months. These are sent back to each <i>kebele</i> to be translated into local languages and posted in a communal area. This process should be continued to ensure communities respond when new information is available. · The delivery of plastic rain gauges to each farmer has improved weather information and allowed adjustments to be made to the crop calendar.

Productive Safety Net Programme 4 (PSNP 4) Established in 2005, the PSNP has been granted additional financing numerous times to further the reach of the programme, hence it is now in PSNP 4. The programme is being implemented in ~400 woredas across Ethiopia. The main objectives of the PSNP 4 are to: i) bridge the income gap for chronically food insecure households; ii) engage such households in community asset-building efforts to earn income – especially during the lean season and drought; and iii) enable such households to resist the impacts of climate change. The focus of PSNP 4 is similar to that of MERET, as it aims to reduce food insecurity in chronically food-insecure communities. However, the PSNP 4 offers a combination of cash and food in exchange for labour, rather than food alone as in the MERET programme. In so doing, PSNP 4 injects cash into local communities, thereby boosting local economies and improving livelihoods across Ethiopia. The PSNP 4 is a WFP initiative supported by a wide range of donors, including inter alia DfID and the World Bank. The programme has two components: i) labour-intensive public works; and ii) direct support for labour-poor households.

A number of recommendations have arisen from lessons learned in both the PSNP and MERET programmes. These recommendations have been integrated into the proposed LDCF project to build proactive and adaptive responses to climate change threats. The recommendations include inter alia:

- improving seasonal and short-term early warning information for farmers and micro-finance institutions to assess risk and potential returns from investments;
- aligning project implementation with national priorities and ongoing initiatives;
- promoting the addition of value to products through the bundling of products for sale at markets;
- developing effective scaling up and sustainability strategies; and
- strengthening monitoring and evaluation systems – this involves ensuring baseline studies are conducted at the start of project implementation.

The PSNP 4 is having a positive impact amongst the vulnerable communities in Ethiopia. However, the programme does not presently build suitable self-reliance required for adaptation that is proactive, deliberate and planned. The impacts of PSNP 4 – of which include asset protection and soil and water conservation – would be enhanced if the programme were combined with other development initiatives to reach further regions across Ethiopia. In this way, the proposed LDCF project would not overlap with PSNP 4 but would assist in upscaling the reach of the programme.

Sustainable land management programme (SLMP II) (2015–2018) The sustainable land management (SLM) programme in Ethiopia is funded by a wide range of donors, including inter alia DfID, the European Union (EU), Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and the World Bank. The programme aims at reducing land degradation and increasing agriculture productivity in the most vulnerable areas of the Ethiopian highlands. The SLM

programme has since been reviewed and upgraded to the SLMP II by the Natural Resource Directorate of the Ministry of Agriculture at the federal level, and the ministry's administrative structure at the regional and local levels. Communities plan and implement the measures on the ground, supported by an elected community and kebele watershed team of SLM experts. The main objective of SLMP II is watershed development which consists of inter alia watershed rehabilitation and the development of agriculture production. The programme is supported by the World Bank and the German KfW bank and operates in Asosa, Gambella and ATJ Kombolcha woredas in the Ethiopian highlands. Although the SLMP II programme is contributing to sustainable land management and watershed rehabilitation in Ethiopian highland woredas, it does not account for climate risk information. Such early warning information is critical for climate resilient land use planning, especially in the particularly vulnerable Ethiopian watersheds. The proposed LDCF project addresses this gap and provides opportunities to upscale the SLMP II programme into Ethiopian lowlands as well as the highlands. Further to this, the proposed LDCF project will closely coordinate with the SLMP II programme to learn and grow from its best practices.

Ethiopia Local Government Development Project II (2014–2019) This is the second phase of the Local Government Development Programme for Ethiopia. Funded by the World Bank, the programme supports the planning, delivery and sustained provision of priority municipal services and infrastructure. The main objective is to address institutional and fiscal gaps at the urban local government (ULG) level. The programme development objective is to assist local government structures in enhancing the institutional performance of ULGs, specifically in developing and sustaining urban infrastructure and services. Phase one of the programme focused on addressing the capacity and infrastructure deficits of 37 ULGs. This phase established a robust local government performance grant system. This system successfully delivered both institutional strengthening and associated infrastructure results in the limited number of cities within its scope. Phase two addresses the following challenges: i) institutional capacity gaps at ULGs; ii) delays in procurement of the annual performance assessment; iii) insufficient funding level incentives in Addis Ababa; and iv) inadequate systems for tracking the specific use of programme funding. The proposed LDCF project will build on the strengthening objective of the programme in the promotion of community-based adaptation across the Ethiopian highlands and lowlands.

Capacity Development for Agricultural Innovation Systems (CDAIS) (2015–2018) The three-year CDAIS project was launched at the end of 2015 by the EU. CDAIS operates in eight countries across Africa, Asia and Central America, namely Angola, Burkina Faso, Ethiopia, Rwanda, and Bangladesh, Laos, Guatemala and Honduras. The objective of the initiative is to: i) assist in making agriculture more productive and sustainable; ii) improve the livelihoods of smallholder farmers; iii) increase food security; and iv) to lower rural poverty. CDAIS is jointly implemented through a grouping of European universities and higher agricultural research centres – known as Agrinatura – and the UN's Food and Agriculture Organisation (FAO). The implementing entities bring together key stakeholders from each of the pilot countries to develop national capacity plans for agricultural innovation. On a global scale, CDAIS will use the lessons learnt from all pilot countries to develop a mechanism to promote, coordinate and evaluate capacity development for sustainable agricultural growth. The proposed LDCF project will build on the CDAIS objective of strengthening adaptive capacity in Ethiopia.

Strengthening Climate Information and Early Warning Systems in Africa for Climate Resilient Development and Adaptation to Climate Change – Ethiopia This GEF/LDCF-funded project aims to strengthen the capacity of the GoE to observe, analyse and forecast climate information to enhance their early warning systems, and for climate resilient development and adaptation to climate change. The project's activities will: i) contribute to Ethiopia's NAPA priorities; ii) support the National CRGE Strategy; iii) strengthen the observational and analytical capacity of the national hydro-met services and its early warning system; and iv) support the disaster risk management and development planning agencies in their effort to adapt to climate change.

The project will draw upon lessons learned, as well as tools and methods developed under any of the projects to ensure that there is no duplication of investments in methodology development. During the PPG phase, further analysis will be undertaken to identify relevant projects that should be coordinated with the current GEF proposal, and linkages will be established.

PSG: Sustainable Land Management Project 2 This is a multi focal area GEF Trust Fund project with the objective to reduce land degradation and improve land productivity in selected watersheds in six Ethiopian regions. Lessons learned will be integrated into the proposed LDCF project, specifically in the adoption of new technologies for increasing productivity of pasture and rangelands under future climate change scenarios.

Urban Productive Safety Net Project (UPSNP) The objective of this project is to support the GoE to improve incomes of targeted households and to establish urban safety net mechanisms. The proposed LDCF project aims to improve livelihoods of vulnerable communities. Under Outcome 3, lessons learned will be communicated to other woredas through the establishment of learning centres, where the proposed LDCF the project can build on UPSNP work and integrate it into knowledge sharing to further strengthen community livelihoods.

7. Consistency with National Priorities

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

Yes

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

- National Action Plan for Adaptation (NAPA) under LDCF/UNFCCC
- National Action Program (NAP) under UNCCD
- ASGM NAP (Artisanal and Small-scale Gold Mining) under Mercury
- Minamata Initial Assessment (MIA) under Minamata Convention
- National Biodiversity Strategies and Action Plan (NBSAP) under UNCBD
- National Communications (NC) under UNFCCC
- Technology Needs Assessment (TNA) under UNFCCC
- National Capacity Self-Assessment (NCSA) under UNCBD, UNFCCC, UNCCD
- National Implementation Plan (NIP) under POPs
- Poverty Reduction Strategy Paper (PRSP)
- National Portfolio Formulation Exercise (NPFE) under GEFSEC
- Biennial Update Report (BUR) under UNFCCC
- Others

The proposed LDCF project is aligned with Ethiopia's National Adaptation Programme of Action (NAPA; 2007). The GoE developed the NAPA in accordance with the requirements outlined in the UNFCCC COP 7, which listed 37 urgent and immediate adaptation needs. These were further refined to a list of 11 priority projects, the majority of which are specifically concerned with community adaptation. The proposed LDCF project is aligned with the following NAPA priorities:

- Priority 2: strengthening/enhancing drought and flood early warning systems. The project will support the use of seasonal forecasts, climate advisories and real-time agro-meteorological information by farmers and pastoralists to better plan for climate change impacts (see Outputs 2.3 and 2.4).
- Priority 3: development of small-scale irrigation and water harvesting schemes. The project will support improved irrigation practices and rainwater harvesting for small-scale irrigation (see Output 2.5 and Section 1.3 of this PIF).
- Priority 4: improving/enhancing rangeland resource management practices. The project will support the restoration of degraded watersheds and improved management of rangeland areas (see Output 2.5 and Section 1.3 of this PIF).
- Priority 6: capacity building for climate change adaptation. This project has a large focus on capacity building for implementing adaptation interventions at various levels. In particular, capacity building focusses on tools and training on gender-sensitive vulnerability assessments and adaptation planning (Outputs 1.1 and 1.2), as well as the implementation of adaptation interventions and the use of climate advisories (Outputs 2.2 and 2.3).
- Priority 7: realising food security. The project will support improved agricultural production through promotion of climate-resilient cropping techniques as well as diversification of livelihood options and income-generating opportunities (see Outputs 2.3 and 2.5 as well as Section 1.3 of this PIF). This will lead to enhanced food and nutrition security as a result of more reliable agricultural production and improved household income levels.

The Second National Communication (SNC) of Ethiopia to the UNFCCC (2015) states that Ethiopia is willing to contribute to the reduction of greenhouse gas emissions as per the goals of the Convention. It also outlines the climate vulnerability of various economic sectors – particularly the agricultural sector. The

SNC identifies several climate change induced threats to the agricultural sector, including inter alia: i) increased frequency and intensity of droughts; ii) increased soil erosion; and iii) increased mean annual temperatures. The proposed LDCF project is aligned with the provisions for climate change adaptation under the UNFCCC in that it aims to increase the climate resilience of Ethiopia's agricultural sector in the most vulnerable communities by increasing technical capacity for planning and implementing of climate change adaptation practices.

The Sustainable Development Goals (SDGs) build on the Millennium Development Goals (MDGs) and are underpinned by an array of issues that address the root causes of poverty and the need for development on a global scale. There are 17 SDGs with varying focuses including hunger, gender inequality and access to water. The proposed LDCF project aligns with the SDGs, in particular with SDG number's: 1) poverty; 5) gender equality; 11) sustainable cities and communities; and 13) climate action.

The proposed LDCF project is aligned with Ethiopia's Intended Nationally Determined Contribution (INDC). Specifically, the INDC identifies two main approaches for addressing climate change, namely mitigation and adaptation. Within the INDC's adaptation component, the GoE intends to undertake adaptation initiatives to the vulnerability of Ethiopia's population, including farmers and pastoralists to the adverse effects of climate change – a goal with which the project's objective is well aligned. In addition, the INDC identifies the need to increase the resilience of livelihoods to climate change in three pillars, including droughts.

Ethiopia's Climate Resilient Green Economy Strategy (CRGE; 2011) outlines sustainable methods for achieving economic development goals. Agricultural development is identified in CRGE as a foundation for economic growth in Ethiopia. Specifically, improved crop and livestock production practices are highlighted as a means of improving food security and agricultural livelihoods while reducing carbon emissions. The proposed LDCF project is aligned with the CRGE in that its activities will increase the capacity of local communities to practice farming and agro-pastoralism, even under conditions of climate change.

The Agriculture-Led-Industrialization Strategy (ADLI; 2007) aims to enhance the productivity and income of small-scale farmers through inter alia: i) introducing sustainable agricultural practices; ii) increasing export earnings; and iii) increasing crop diversity. The proposed LDCF project is aligned with the ADLI in that it increases local community and government capacity to practice climate resilient farming and agro-pastoralism and to diversify livelihoods.

The focus of Phase II of Ethiopia's Growth and Transformation Plan (GTP; currently under formulation) is to alleviate poverty and support the achievement of middle-income status for the country before 2025. Agricultural development is identified as a means of achieving poverty alleviation, with a focus on inter alia: i) land rehabilitation through water and soil conservation; ii) livestock production; and iii) agricultural research. The proposed LDCF project will address the baseline problem identified in Phase I of the GTP of land degradation related to overgrazing and other unsustainable land use practices. Consequently, the project is expected to be aligned with the aims of Phase II of the GTP in that it will promote poverty alleviation through the development of the national agriculture sector in a climate-resilient manner. The finalisation of GTP Phase II is expected to occur during the PPG phase, and the project will be designed in accordance with its provisions.

The Agriculture and Rural Development Policy and Strategy (2003) identifies agricultural and rural development as a means of: i) supporting rapid economic growth; ii) enhancing benefits to rural people; iii) addressing the country's food aid dependency; and iv) promoting the development of a market-oriented economy. The proper utilisation of agricultural land and dissemination of appropriate technology are identified as two approaches to developing agriculture in Ethiopia. The proposed LDCF project supports both of these approaches through its climate resilient pastoral and agro-pastoral interventions.

Poverty reduction is the overarching policy objective of the GoE. The Plan for Accelerated Sustained Development to End Poverty II (PASDEP-II) is the Ethiopian five-year poverty reduction development plan and is the governing instrument that guides investment and budgeting in Ethiopia. PASDEP II responds to climate-related impacts, such as drought-related food security problems. The plan's strategy is to address these challenges and to include them in the implementation of: i) a national disaster prevention and preparedness policy and strategy; and ii) a national programme on sustainable land management. PASDEP II highlights climate change as a priority of the nation's development priority.

The Environmental Policy of Ethiopia outlines important policy measures related to climate change, stating that the Government should "develop effective methods of popular participation in the planning and implementation of environmental and resource use and management projects and programmes" and "co-opt existing traditional systems of research and learning into a new system which incorporates both modern and traditional components...". The proposed LDCF project is consistent with this policy in that it seeks to develop methods for community participation in local level planning and will look at both new and traditional technologies for adaptation in the intervention planning process.

The proposed LDCF project is further aligned with various other national policies, including: i) the Water Resources Management Policy; ii) the Health Sector Development Policy and Programme; and iii) the National Policy on Disaster Prevention and Preparedness. It is expected that this proposed LDCF project will generate valuable lessons, methodologies and approaches to strengthen these policies so as to promote climate resilience in national planning.

8. Knowledge Management

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

The knowledge management strategy for the proposed LDCF project includes a component focused specifically on collating and disseminating knowledge on community-based adaptation practices to address increasing community vulnerability to climate change (see Component 3). Knowledge management activities to be implemented under this component include documentation of lessons learned and best practices to promote replication and upscaling, the establishment of woreda-level knowledge centres to facilitate knowledge sharing and exchange of best practices between woredas, and awareness-raising campaigns. This will support dissemination of lessons learned and best practices from the baseline projects and from the project itself amongst project stakeholders, including partner agencies, government ministries, civil society, NGOs and local communities. Training and capacity building conducted through the project will incorporate lessons learned from the MERET programme, the “CCA Growth: Implementing Climate Resilient and Green Economy plans in highland areas in Ethiopia” project and other national initiatives as well as international best practices. This will contribute not only to improved implementation of interventions during the course of the project, but will also inform replication and upscaling of project activities.

Part III: Approval/Endorsement By GEF Operational Focal Point(S) And Gef Agency(ies)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the Operational Focal Point endorsement letter with this template).

Name	Position	Ministry	Date
Gemedo Dalle (Dr.)	Minister	MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE	8/24/2018

ANNEX A: Project Map and Geographic Coordinates

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

provided in 1b. section