



# GEF-6 REQUEST FOR PROJECT ENDORSEMENT/APPROVAL

PROJECT TYPE: FULL-SIZED PROJECT

TYPE OF TRUST FUND: LEAST DEVELOPED COUNTRIES FUND

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## PART I: PROJECT INFORMATION

Project Title: CCA Growth: Implementing climate resilient and green economy plans in highland areas in Ethiopia			
Country(ies):	Ethiopia	GEF Project ID: <sup>1</sup>	6967
GEF Agency(ies):	UNDP	GEF Agency Project ID:	5478
Other Executing Partner(s):		Submission Date:	22 Feb. 17
GEF Focal Area (s):	Climate Change	Project Duration (Months)	60
Integrated Approach Pilot	IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/>	Corporate Program: SGP	<input type="checkbox"/>
Name of Parent Program	Not applicable	Agency Fee (\$)	\$596,315

## A. FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES<sup>2</sup>

Focal Area Objectives/Programs	Focal Area Outcomes	Trust Fund	(in \$)	
			GEF Project Financing	Co-financing
CCA-1	Reduce the vulnerability of people, livelihoods, physical assets and natural systems to the adverse effects of climate change	LDCF	3,500,000	7,000,000
CCA-2	Strengthen institutional and technical capacities for effective climate change adaptation	LDCF	2,777,000	3,450,000
<b>Total project costs</b>			6,277,000	10,450,000

## B. PROJECT DESCRIPTION SUMMARY

**Project Objective:** 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.

Project Components/Programs	Financing Type <sup>3</sup>	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Confirmed Co-financing
Component 1. Capacity development	TA	Outcome 1: Capacities enhanced for climate-resilient planning among communities, Woreda, regional and federal government.	Output 1.1: Assessment of the capacity and resource needs of MoANR, MoLF, MoFEC, MEFCC, MoWIE and NMA at federal, regional and Woreda-level to build climate resilience. Output 1.2: Capacity development of staff from MoANR, MoLF, MoFEC, MEFCC, NMA and MoWIE at federal,	LDCF	796,780	950,000

<sup>1</sup> Project ID number remains the same as the assigned PIF number.

<sup>2</sup> When completing Table A, refer to the excerpts on [GEF 6 Results Frameworks for GETF, LDCF and SCCF](#) and [CBIT programming directions](#).

<sup>3</sup> Financing type can be either investment or technical assistance.

			<p>regional and Woreda-level on climate change and climate-resilient planning.</p> <p>Output 1.3: Training of extension agents and local communities to integrate climate change into planning processes.</p> <p>Output 1.4: Annual knowledge-sharing forum of regional and Woreda-level sectoral experts, extension agents and community representatives.</p> <p>Output 1.5: Public awareness-raising campaign and training programme for local communities – including for women and youths – on the implementation of climate-resilient adaptation interventions and diversified livelihoods.</p>			
Component 2. Climate risk information	INV	Outcome 2: Use of climate information for climate risk management strengthened – including for women and youth.	<p>Output 2.1: A functional climate information and Early Warning System to monitor weather conditions.</p> <p>Output 2.2: Community-based climate forecast and decision-making support tool.</p> <p>Output 2.3: Capacity development of extension agents, CBOs (women’s groups, school clubs and youth groups) as well as farmers on climate information and monitoring systems.</p>	LDCF	701,525	1,400,000
Component 3. Adapted livelihoods	INV	Outcome 3: Adapted and diversified income and employment	Output 3.1: Vulnerability assessments and integrated watershed	LDCF	4,484,695	7,800,000

		opportunities generated for local communities, with a focus on climate-smart agriculture and integrated watershed management.	management and landscape management plans. Output 3.2: Integrated watershed management across the eight target Woredas. Output 3.3: Diversified livelihoods, including animal fattening, value-addition to agricultural products and off-farm opportunities. Output 3.4: Strategy for monitoring, evaluating and upscaling activities, including potential for local investment by microfinance institutions (MFIs).			
			Subtotal		5,983,000	10,150,000
			Project Management Cost (PMC) <sup>4</sup>	(select)	294,000	300,000
			<b>Total project costs</b>		<b>6,277,000</b>	<b>10,450,000</b>

**C. CONFIRMED SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE**

Please include evidence for co-financing for the project with this form.

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
GEF Agency	UNDP	Grants	200,000
Recipient Government	Ministry of Environment, Forest and Climate Change	In-kind	10,250,000
<b>Total Co-financing</b>			10,450,000

**D. TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES), FOCAL AREA AND THE PROGRAMMING OF FUNDS**

GEF Agency	Trust Fund	Country Name/Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee <sup>a)</sup> (b) <sup>2</sup>	Total (c)=a+b
UNDP	LDCF	Ethiopia	CC	(select as applicable)	6,277,000	596,315	6,873,315
<b>Total Grant Resources</b>					<b>6,277,000</b>	<b>596,315</b>	<b>6,873,315</b>

a) Refer to the Fee Policy for GEF Partner Agencies

<sup>4</sup> For GEF Project Financing up to \$2 million, PMC could be up to 10% of the subtotal; above \$2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

## E. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS<sup>5</sup>

Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	17, 800 hectares <sup>6</sup>

## F. DOES THE PROJECT INCLUDE A “NON-GRANT” INSTRUMENT? NO

## PART II: PROJECT JUSTIFICATION

### A. DESCRIBE ANY CHANGES IN ALIGNMENT WITH THE PROJECT DESIGN WITH THE ORIGINAL PIF<sup>7</sup>

There have been no changes in terms of the GEF/LDCF strategic focus or eligibility since the original PIF. The proposed LDCF project is consistent with LDCF Objectives CCA-1 “Reduce vulnerability to the adverse impacts of climate change, including variability, at local, national, regional and global level” and CCA-2 “Increasing adaptive capacity to respond to the impacts of climate change, including variability, at local, national, regional and global level”.

Structural changes have been made in terms of the alignment of the project document with the original project design in the PIF. These changes were made based on stakeholder consultations and reflect changing national circumstances since the PIF was developed. The wording of various outcomes has been amended to make them more specific and relevant to the current national context as well as to fit stakeholders’ specific needs. However, while the exact wording of the outcomes may have changed, there has been no change in their focus and they remain based upon the same underlying principles. The consultations were used to refine the outcomes and outputs in order to achieve the desired developmental outcomes in accordance with the original PIF (see Annex IX for further details on stakeholder consultations). The revisions to the outcomes are detailed in the table below.

Project Identification Form	Project Document	Project Document /CEO Endorsement Request
<b>Project component/expected outcomes</b>	<b>Project component/expected outcomes</b>	<b>Justification of the change to the PIF</b>
Outcome 1: Capacities enhanced for climate-resilient planning among communities, local government and central government.	Outcome 1: Capacities enhanced for climate-resilient planning among communities, Woreda, regional and federal governments.	The use of the term ‘central government’ was changed to ‘national government’ as this is more specific and is consistent with the terminology used throughout the text in the project document.
Outcome 2: Anticipatory climate risk management practiced by smallholder farmers, with a focus on women and youth.	Outcome 2: Use of climate information for climate risk management strengthened – including for women and youths.	The wording of the outcome has been changed so as to clarify the meaning of the outcome. The underlying activities associated with this outcome remain the same.

<sup>5</sup> Update the applicable indicators provided at PIF stage. Progress in programming against these targets for the projects per the Corporate Results Framework in the GEF-6 Programming Directions, will be aggregated and reported during mid-term and at the conclusion of the replenishment period.

<sup>6</sup> Including establishment of 800 hectares of new enclosure sites, maintenance of 8000 existing enclosures and planting of indigenous and multi-use plant species over 8800 hectares of degraded land.

<sup>7</sup> For questions A.1 –A.7 in Part II, if there are no changes since PIF , no need to respond, please enter “NA” after the respective question.

Outcome 3: Adapted and flexible income and employment opportunities generated for poor people.	Outcome 3: Adapted and diversified income and employment opportunities generated for local communities, with a focus on climate-smart agriculture and integrated watershed management.	The term ‘flexible’ has been replaced by ‘diversified’ so as to portray more accurately the associated activities under this outcome. Additionally, the term ‘poor people’ has been replaced with the term ‘local communities’ as the latter is more appropriate and more accurate than the former. The phrase ‘with a focus on climate-smart agriculture and integrated watershed management’ has been added to the description of this outcome so as to provide the reader with a more accurate and in-depth insight regarding the proposed activities associated with this outcome.
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### A.1. Project Description.

#### Adaptation problem

Ethiopia is a landlocked country with a population of ~101,500,000 people, over two thirds of whom live in rural areas. The country has a Federal State Government system comprising nine regional states, which are further divided into zones, Woredas and Kebeles. Ethiopia’s economy has grown rapidly in the last decade primarily as a result of increased agricultural production. The agricultural sector – which accounts for more than 80% of total employment and 45% of the country’s GDP – is dominated by small-scale rural farmers<sup>8</sup>. Current practices of cultivating crops and overgrazing of livestock on steep slopes by these farmers<sup>9</sup> contribute towards soil erosion and large-scale land degradation<sup>10</sup>. This poses a threat to long-term agricultural sustainability. Furthermore, women are being left to run households and raise children as men are migrating to urban areas to seek employment opportunities. This increases the burden on rural Ethiopian women, as they are left responsible for running farms. In addition, agricultural productivity is threatened by unsustainable management of natural resources as a result of limited management capacity of Woreda-level government.

Two seasonal rains are experienced in Ethiopia. The Kiremt are the long rains that fall in the northern highlands in July and August and in the central highlands between June and September. Annual Kiremt rainfall is ~200–1200mm per year. The Belg are shorter and less consistent rains that fall in parts of southern Ethiopia between March and May and in parts of the northern and central highlands between February and May. Belg rains provide an annual rainfall of ~100–750 mm<sup>11</sup>.

Warming as a result of climate change is occurring across much of the country at a variable rate but broadly consistent with wider African and global trends<sup>12</sup>. Average national temperatures have increased by 1.3°C between 1960 and 2006<sup>13</sup>. The average number of ‘hot’ days per year in Ethiopia has increased by 73 (an additional 20% of days) between 1960 and 2003 and the average number of ‘hot’ nights per year increased by 137 (an additional 37.5% of nights) between 1960 and

<sup>8</sup> ~95% of the total area under agricultural use [http://global-growing.org/sites/default/files/GGC\\_Ethiopia.pdf](http://global-growing.org/sites/default/files/GGC_Ethiopia.pdf)

<sup>9</sup> which include *inter alia*: i) deforestation for wood fuel; ii) cropping in marginal areas such as steep slopes; and iii) overgrazing

<sup>10</sup> The problem has been recognised since the early 1970s by the Government of Ethiopia (GoE) itself, which states the causes to include, “poverty, population pressure, inappropriate (land) use and management, inadequate inputs, unsuitable farming and grazing practices, inappropriate technologies, inefficient markets...and land tenure insecurity” (Government of Ethiopia. 2011. Revised Project Implementation Manual for the Sustainable Land Management Program. Ministry of Agriculture and Rural Development, The Federal Democratic Republic of Ethiopia. January, 2011)

<sup>11</sup> Famine Early Warning Systems Network (FEWS NET). 2012. A climate trend analysis of Ethiopia. Fact sheet 2012–3053. US AID, April 2012.

<sup>12</sup> Conway D & Schipper LEF. 2011. Adaptation to climate change in Ethiopia: opportunities identified from Ethiopia. *Global Environmental Change* 21: 227–237.

<sup>13</sup> McSweeney C, Lizcano G, New M & Lu X. 2010. The UNDP Climate Change Country Profiles. *Bulletin of the American Meteorological Society* 91: 157–166.

2003<sup>14</sup>. According to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) (2007), Ethiopia will experience a mean annual temperature increase of 0.9–1.1°C by 2030, 1.7–2.1°C by 2050 and 2.7–3.4°C by 2080<sup>15</sup>. Additionally, the frequency of ‘cold’ days also decreased significantly in all seasons between 1960 and 2003, except the three winter months of December through to February. The frequency of ‘cold’ nights has decreased more rapidly and significantly in all seasons. Furthermore, the average number of ‘cold’ days per year has decreased by 21 (5.8% of days) between 1960 and 2003<sup>16</sup>.

Climate change is also causing increasing variability in rainfall on both a spatial and temporal scale<sup>17</sup>. Rainfall is projected to decrease in the northern regions of Ethiopia. By contrast, rainfall is projected to increase in the southern regions by as much as 20% by 2070<sup>18</sup>. In addition, the Ethiopian highlands will experience more intense, irregular rainfall during this same time period. Such variability is having a negative impact on agricultural production and therefore peoples’ livelihoods. For example, the shortening of the Belg rains has made it near impossible to grow cereal crops in certain southern regions – such as South Wollo – in the last decade.

The effects of floods and drought on local communities is severe across Ethiopian highlands. For example, the drought experienced in 1984, which affected the northern regions of Ethiopia – including Tigray and Amhara – led to the deaths of more than one million people with a further eight million experiencing famine<sup>19</sup>. Since 1984, there have been 11 recorded occurrences of drought<sup>20</sup> resulting in ~500,000 deaths<sup>21</sup>. The current drought in 2016 is caused by intense El Niño conditions and is one of the most severe droughts recorded in the last 50 years<sup>22</sup>. This drought has negatively affected rural communities and has led to a 15%<sup>23</sup> reduction in crop production, with more than 10 million people in need of food aid<sup>24</sup>. The 2016 drought has also been followed by flooding, which has led to the deaths of at least 100 people<sup>25</sup>. Since the early 1980s, there have been at least seven<sup>26</sup> major floods on record<sup>27</sup>. The most severe of these floods was in 2006 and led to the death of more than 800 people<sup>28</sup>.

Aside from the abovementioned impacts, climate change has greatly intensified the degradation of farmland and watersheds in Ethiopia. All of these climate change effects contribute to a negative cycle of: i) reduced soil organic matter (with concomitant reductions in nutrient availability and water infiltrability); ii) greater runoff of rainwater; iii) increased rates of soil erosion; and iv) reduced agricultural productivity. As a result, local communities in Ethiopian highlands are increasingly vulnerable to climate change because they are experiencing: i) a decrease in stream flows; ii) a decline in groundwater levels; iii) the drying up of springs; iv) the siltation of lakes; and v) an increase in the frequency of floods and droughts. In the project Woredas, flooding is experienced on average, five times per year and has caused 54 people and 240 livestock animals to lose their lives. As ~90% of Ethiopia’s population reside in the highlands, a large number of people are at risk to the impacts of climate change, particularly in rural areas<sup>29</sup>. Additionally, during PPG phase

<sup>14</sup> Rosell S. 2011. Regional perspective on rainfall change and variability in the central highlands of Ethiopia, 1978–2007. *Applied Geography* 31: 329–338.

<sup>15</sup> Climate change national adaptation programme of action (NAPA) of Ethiopia. 2007. Available online at: <http://unfccc.int/resource/docs/napa/eth01.pdf>

<sup>16</sup> Rosell S. 2011. Regional perspective on rainfall change and variability in the central highlands of Ethiopia, 1978–2007. *Applied Geography* 31: 329–338.

<sup>17</sup> Ibid.

<sup>18</sup> [http://siteresources.worldbank.org/INTAFRICA/Resources/Ethiopia\\_Country\\_Note.pdf](http://siteresources.worldbank.org/INTAFRICA/Resources/Ethiopia_Country_Note.pdf) [Accessed 16 May 2016]

<sup>19</sup> <http://www.fao.org/docrep/003/x8406e/X8406e01.htm> [Accessed 12 May 2016]

<sup>20</sup> 1987, 1989, 1997, 1998, 1999, 2003, 2005, 2008, 2009, 2012, and 2016

<sup>21</sup> <http://www.hydrol-earth-syst-sci.net/18/3635/2014/hess-18-3635-2014.pdf>

<sup>22</sup> De Jong E. 2016. *Everything has changed: El Niño and the drought in Ethiopia*. CareClimateChange. Available online at: <http://careclimatechange.org/case-studies/el-nino-drought-ethiopia/> [Accessed 12 May 2016].

<sup>23</sup> <http://www.trocaire.org/sites/trocaire/files/resources/policy/ethiopia-climate-change-case-study.pdf> [Accessed 16 May 2016]

<sup>24</sup> <https://www.oxfam.org/en/ethiopia-drought-ethiopia/el-nino-strikes-ethiopia-without-water-we-are-no-more> [Accessed 16 May 2016]

<sup>25</sup> <http://floodlist.com/africa/ethiopia-100-dead-flood-threat-worsens> [Accessed 16 May 2016]

<sup>26</sup> 1988, 1993, 1994, 1995, 1996, 2006 and 2016

<sup>27</sup> Climate change national adaptation programme of action (NAPA) of Ethiopia. 2007. Available online at: <http://unfccc.int/resource/docs/napa/eth01.pdf>

<sup>28</sup> <http://www.worldwatch.org/node/4591> [Accessed 16 May 2016]

<sup>29</sup> Robinson S, Strzepek K & Cervigni R. 2013. The Cost of Adapting to Climate Change in Ethiopia: Sector-Wise and Macro-Economic Estimates. IFPRI, ESSP Working Paper 53. Available online at: <http://www.ifpri.org/sites/default/files/publications/essppw53.pdf>. [Accessed 15 May 2016]

stakeholders mentioned that the yields of certain crops have decreased to such an extent that they are no longer grown. Future climate change will exacerbate the abovementioned impacts thereby increasing local communities' vulnerability.

### Root causes and barriers

There are several institutional, technical and financial barriers to effectively reducing and managing the impacts of climate change in Ethiopia. These are discussed below.

- *Limited understanding and awareness of the need to incorporate climate change adaptation (CCA) interventions into land use plans and management of natural resources:* There is insufficient knowledge and awareness in Woreda government structures and local communities across Ethiopia of: i) the role that CCA interventions and ecosystem restoration can have in reducing the negative effects of climate change; and ii) how an integrated approach – that considers CCA interventions for watershed management and diversification of livelihoods – can increase the adaptive capacity of local communities to the effects of climate change. The effective planning and implementation of CCA interventions in Ethiopian highlands is consequently hampered. In addition, responses to extreme weather events are often reactive rather than proactive because of little access to weather information that is tailored to the needs of local communities. Similarly, ecosystem degradation by local communities is partly a result of sub-optimal knowledge of sustainable natural resource management under current and future climate change conditions. For example, local communities are currently largely unaware that degradation of watersheds results in reduced infiltration, increased runoff, flash flooding, erosion and siltation of rivers and lakes – which will all be exacerbated by the effects of climate change.
- *Limited technological, financial and institutional capacity at national and sub-national levels to support implementation of adaptation interventions:* Although climate change is recognised as a matter of national importance within Ethiopia's CRGE strategy, the Agriculture Sector Climate Resilient Strategy and the NAPA, the technical and scientific understanding of climate change and adaptation within the country is not well developed. However, efforts to enhance this understanding have been observed. For example, technical capacity building programmes are taking place through several programmes such as the Agricultural Growth Programme (AGP) and PSNP. Despite these programmes, the capacity to undertake climate modelling for Ethiopia, prepare forecasts and issue early warnings can be improved. Gaps in the technical capacity of government technical staff can be attributed to: i) insufficient training of staff employed in relevant departments within the Ministry of Agriculture and Natural Resources (MoANR), Ministry of Environment, Forest and Climate Change (MEFCC), as well as development agents and extension officers (hereafter "extension agents"<sup>30</sup>) at Woreda-level; and ii) understaffing of these ministries.
- *Inadequate climate information and monitoring networks/stations:* The main challenge to maintaining accurate and updated climate data is the variable development of Ethiopia's climate monitoring infrastructure, which hinders the collection and the transfer of such data. Insufficient telecommunication infrastructure is a further challenge, especially to the transfer of data. Internet connectivity and mobile signals are restricted, particularly within rural villages because of the topography and restricted telecommunication network equipment. Subsequently, access to real-time data is limited. This is a barrier to the comprehensive and effective use of climate information and dissemination of early warnings to local communities in Ethiopia and limits appropriate responses to climate change threats.
- *Limited availability and capacity of agricultural extension agents at Woreda-level:* Government extension agents at Woreda-level have sub-optimal access to technical training on the implementation of CCA interventions. The extent to which rural farmers adopt and implement climate-smart agriculture (CSA) practices and soil and water

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<sup>30</sup> At Kebele level, "development agents" are responsible for technical advisory services to farmers. At a Woreda-level, "extension officers" oversee the activities of and provide guidance to development agents. The term "extension agents" is used to refer to both levels throughout this document, as their roles often overlap.

conservation (SWC) measures 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 CCA interventions is reaching local communities.

### The baseline scenario and associated baseline projects

Climate change is a relatively new concept for Woreda administrators, technical experts and other stakeholders in Ethiopia at national and sub-national level. Currently, there are no ongoing projects/programmes in Ethiopia that focus on building the capacity of government officials to integrate climate change risks and opportunities into: i) annual, medium- and long-term socio-economic development plans; ii) public budget allocations; and iii) decision-making processes. At a sub-national level, human capacity development programmes are being implemented in certain Woredas with the support of the regional extension agents. However, the scope of these programmes does not extend to integrating climate change considerations into development planning and budgetary processes.

During the PPG phase of this project, Woreda-level administrators expressed a need for knowledge-sharing in order to keep up to date with relevant climate-information and best practices. This is primarily because there are no systematic programmes or plans for updating the skills of extension agents and administrators to keep them apprised of new developments in the science and practice of CCA. Apart from generic technical publications, extension agents and administrators have little else in the way of informative materials and extension aids to support their work and effectively inform farmers of innovative adaptation approaches. New and improved CCA interventions – stemming from local and international best practices – are as a result not currently being disseminated effectively to farmers in the Ethiopian highlands.

At present, infrastructure for meteorological purposes is limited across Ethiopia. Weather-information generation, analysis and decision-making in Ethiopia is also taking place on an ad hoc basis. Where meteorological stations are in place, weather information is currently collected manually on a daily basis by hand. This is sent to a regional office where it is checked for inconsistencies and ultimately to the central NMA office in Addis Ababa where data is manually entered into computers. There is however, no formal institutionalised system in place to provide each Woreda with tailored climate information – particularly “agro-meteorological” information – in a manner that will provide guidance to local communities on how to respond to extreme weather events or adjust their farming methods accordingly.

Currently, downscaled weather forecasting is available. However, this information is only available at a low resolution and is therefore often unreliable and of little assistance to end users. Experts within the Woredas use the information available to advise local communities on how to protect their property and themselves from the negative effects of climate change. In this context, the local administrators meet with local communities to discuss impending extreme weather events – particularly during harvest time. These discussions focus on how to prevent or minimise damage to crops and livestock. However, the actions decided upon at such meetings are not timeously decided upon and implemented, which limits the positive effects thereof.

Agriculture is the main source of income for many Ethiopians, particularly in the highland areas. Because these areas are characterised by wide-scale degradation, agricultural activities are increasingly being carried out in marginal areas. The local communities have adopted several techniques to combat erosion, such as construction of terraces, water diversion furrows, contour ploughing and soil-stabilisation through the planting of indigenous and exotic plant species. These techniques are inconsistently applied and the structures built are poorly maintained, which can exacerbate the effects – such as soil erosion – that they are intended to contain.



To reverse land degradation and to improve rural livelihoods, the government is implementing several programmes. However, these programmes are not multi-sectoral and usually focus on issues such as land production or soil and water conservation across watersheds. They do not take and have not taken the predicted effects of future climate change on farming systems into account in their approaches. In addition, current land use planning fails to adequately integrate climate change considerations into short-, medium- and long-term development planning. Long-term investments in developing agricultural land are subsequently being implemented without the benefit of appropriate climate-related information being considered. For example, inadequate knowledge regarding flood discharges and the sediment concentration of flows undermines the effectiveness of current physical interventions – particularly diversion structures and flood control measures. Consequently, such structures and measures have been regularly breached and canal networks blocked with sediment deposits. Furthermore, decreases in vegetative cover from deforestation are increasing surface runoff and flooding causing valuable water resources to be lost before groundwater reserves are replenished. The combined impacts of unsustainable land management and climate change will consequently undermine the effectiveness of the existing initiatives.

The baseline projects and aligned projects are described in the table below. The right-hand column describes how the proposed LDCF project will build on, or align with the activities of each project.

**Table 1: A description of baseline and aligned projects**

Title	Budget (US\$)	Timeframe	Objective	Focal activities/ outputs	Funding source	Implementing partner	How the proposed LDCF project will align
World Vision	272,700	1997–2020	To improve the national status of nutrition and food security, thereby improving the economic status of households.	<ul style="list-style-type: none"> <li>Promoting market oriented agricultural production.</li> <li>Leveraging agriculture for improved health and nutrition.</li> <li>Promotion of income generating activities.</li> </ul>	Private international donors	World Vision itself	Outputs 3.2; 3.3; and 3.4 will align with the World Vision Project by: i) improving agricultural yields; ii) introducing income-generating activities; and iii) providing training on business plan development and value-addition to agricultural products.
Agricultural Growth Programme (AGP)	254,500	2017–2021	To contribute towards poverty reduction, climate change mitigation and adaptation through climate smart	<ul style="list-style-type: none"> <li>Introducing climate-smart technology to smallholder farmers.</li> <li>Decreasing poverty at a household level.</li> </ul>	World Bank	MoANR	Through Outputs 3.2; 3.3; and 3.4, the proposed LDCF project will align with the activities of the AGP by further reducing poverty through the introduction of additional income-generating activities, and by implementing

			agriculture initiatives.				climate-smart agricultural and SWC measures that increase local communities' resilience to climate change.
Sustainable Land Management Programme (SLMP)	834,100	2015–2018	To increase food security and reduce land degradation in the rural highland areas of Tigray, Amhara and Oromia.	The SLMP provides the following to smallholder farmers: <ul style="list-style-type: none"> <li>• assistance for capital investments; and</li> <li>• technical capacity building.</li> </ul>	KFW (“Kreditanstalt für Wiederaufbau”) Development Bank; GIZ.	MoANR	Outputs 1.2; 1.3; 2.3; and 3.4 will align with the SLMP through technical capacity building programmes, but with focus on integrating climate change risks and opportunities into development practices.
Productive Safety Net Programme – 4 (PSNP4)	763,082	2005–2020	To reduce food insecurity in chronically food-insecure households.	<ul style="list-style-type: none"> <li>• Engage households in community asset- building efforts to earn income</li> <li>• Increase resilience of local communities to adverse impacts of climate change.</li> <li>• Provide “food for work” in watershed restoration initiatives.</li> </ul>	DFID; World Bank	MoANR	The proposed LDCF project will build upon the existing biophysical and physical SWC structures developed by in the PSNP4 Programme. This will take place through Outputs 3.2 and 3.3. Capacity development under Outputs 1.2; 1.3; 2.3; and 3.4 will further the capacity development undertaken by the PSNP4.
Household Asset Building Programme (HABP)	194,900	2011–2020	To diversify income sources and build household assets.	<ul style="list-style-type: none"> <li>• Extending credit to food-insecure households</li> <li>• Creating linkages between MFIs, credit associations and local communities.</li> </ul>	World Bank	MoANR	The proposed LDCF project will align with the HABP by assisting local communities to leverage finance through MFIs. This leveraged finance would ultimately be used to upscale watershed restoration and

							create additional sources of income for local communities.
<b>Aligned Projects</b>							
Mainstreaming incentives for biodiversity conservation in the Climate Resilient Green Economy Strategy (CRGE).	3,316,454	2013-2017	To protect the biodiversity of Ethiopia from current and future threats by ensuring development and investment decisions do not impact negatively on biodiversity.	<ul style="list-style-type: none"> <li>Strengthening the enabling framework for mainstreaming incentives for biodiversity conservation into the CRGE at national level.</li> <li>Piloting payment schemes for the conservation of selected areas of Afromontane forest.</li> </ul>	GEF	MoEF	The proposed LDCF project will align with the said GEF project by conserving indigenous vegetation within project sites. Reforestation under Output 3.2 will contribute towards achieving the overall objective of the said GEF project.
Strengthening climate information and early warning systems in Africa for climate resilient development and adaptation to climate change – Ethiopia. (CIRDA)	4,5 million	2013-2017	To strengthen the climate monitoring capabilities, early warning systems and available climate-related information for responding to climate shocks and planning adaptation to climate change in Ethiopia	<ul style="list-style-type: none"> <li>Enhancing the capacity of NMA and the Hydrology and Water Quality Directorate to monitor extreme weather and climate change events.</li> <li>Promoting the efficient and effective use of hydro-meteorological and environmental information for the production of early warnings and long-term adaptation plans.</li> </ul>	GEF	NMA	The proposed LDCF project will align with the CIRDA programme by i) building the capacity of sub-national NMA staff and extension agents to downscale climate information into useful agrometeorological advice for local communities; and ii) upgrading existing and installing new automatic weather stations in the target Woredas. The activities of the proposed LDCF project will extend the reach of the CIRDA programme to new Woredas and will build on the existing capacity development initiatives in the

							Woredas in which the two projects overlap.
Responding to the increasing threat of drought: building the resilience of the most vulnerable communities through climate-smart and landscape-based investments.	90,7 million	2016–2021	To implement technologies and infrastructure, along with innovative methods, that contribute to climate-smart, landscape-based systems to be rolled out as a key element of the national CRGE strategy.	<ul style="list-style-type: none"> <li>• Implementing climate-smart SWC measures and biological conservation measures.</li> <li>• Promoting livelihood diversification</li> <li>• Strengthening linkages in value chains of agricultural and livestock products.</li> <li>• Developing capacity of national and sub-national government departments to integrate climate considerations into planning, implementation and monitoring of development programmes.</li> </ul>	GCF	EPA	The proposed LDCF project will align with the GCF project by ensuring that duplication of activities does not occur. The GCF project is implementing similar activities, however in different Woredas. The lessons learned will be integrated into the implementation of the LDCF project, particularly those relating to linking with MFIs for the upscaling of project activities.
Great Green Wall Initiative of the Sahara and the Sahel (GGWSSI)	66,780,000	2002-ongoing	To improve the resilience of human and natural systems in the Sahel-Saharan zone against climate change through sound ecosystem management and the sustainable development of land resources, the protection of material and immaterial rural heritage and the improvement of the living conditions	<p>Short to medium term:</p> <ul style="list-style-type: none"> <li>• conserving, restoring and enhancing biodiversity and soils;</li> <li>• diversifying agricultural production systems;</li> <li>• promoting income-generating activities to increase household income; and</li> <li>• improving basic social infrastructure.</li> </ul> <p>Long term:</p> <ul style="list-style-type: none"> <li>• improving carbon sequestration in</li> </ul>	Multi-donor funding including World Bank, FAO	MEFCC	Watershed restoration and sustainable landscape management are common objectives between the GGWSSI and the proposed LDCF project. Thus, the implementation of the LDCF project will contribute towards achieving a greater objective in the Sahara and Sahel. Additionally, the proposed LDCF project will take the lessons learned from the GGWSSI and ensure that they are integrated into the implementation of

			and livelihoods of populations living in these areas.	vegetation cover and soils; <ul style="list-style-type: none"> <li>restoring degraded landscapes; and</li> <li>improving the living conditions of local communities.</li> </ul>			the project activities.
Coping with drought and climate change – Ethiopia	995,000	2007–2011	To enhance the capacity of agricultural systems in Ethiopia to adapt to climate variability and change.	<ul style="list-style-type: none"> <li>Improving livelihoods of vulnerable farmers in selected pilot sites so as to prepare for future droughts;</li> <li>enhancing the use of early warning information in agricultural systems;</li> <li>integrating drought mitigation measures from local to national level; and</li> <li>upscaling of successful drought coping strategies from pilot sites to new areas.</li> </ul>	SCCF	MoFED <sup>31</sup>	The lessons learned from the Coping with drought and climate change project have been integrated into the design of the proposed LDCF project.

### Proposed alternative scenario

The objective of the proposed LDCF 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. In so doing, 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). The total population of the eight target Woredas is ~1,1 million people (52% women and 48% men), comprising ~228,800 households.

The preferred solution is to create sustainable and climate-smart economic growth among vulnerable communities across the Ethiopian highlands. By adopting a participatory planning approach<sup>32</sup> to CCA at the Woreda-level, the proposed LDCF project will contribute towards this solution. Technical and institutional capacity building will take place at national, regional and Woreda-level to improve the understanding of relevant administrators on climate change risks and opportunities. Additionally, the project will strengthen the existing climate information and monitoring systems through: i) investments in the meteorological network; and ii) capacity building in government institutions for disseminating flood

<sup>31</sup> At the time of implementation, MoFEC was still known as the Ministry of Finance and Economic Development (MoFED).

<sup>32</sup> A participatory planning approach is one in which local communities are actively involved in the strategic planning, management and implementation of a project.

and drought early warnings. The project will also enhance institutional capacity and improve coordination for CCA between and within government ministries. This will be achieved through the establishment of a cross-regional knowledge-sharing forum, which will strengthen adaptation planning by increasing access to information, technical support and knowledge. The importance of such a knowledge-sharing forum is highlighted in the lessons learned of the PSNP<sup>33</sup> and MERET<sup>34</sup> programmes.

At a Woreda-level, CCA interventions will include the implementation of SWC measures and CSA practices. These SWC measures and CSA practices will: i) be site-specific; ii) build upon existing physical structures from previous projects in the Woredas; iii) promote a system in which losses are reduced during extreme climate and weather events; and iv) be designed so as to prepare for future climate change. The proposed project activities will consequently: i) build on the existing adaptive capacity at the watershed level; ii) increase the availability of natural resources and ecosystem functioning under conditions of future climate change through the climate-smart restoration of degraded watersheds; iii) improve agricultural productivity under future climate change; and iv) strengthen rural livelihoods by diversifying income-generating opportunities. Through integrated watershed and landscape management, the project will address the inter-linked issues of climate change, food insecurity, land degradation and water scarcity.

The proposed LDCF project objective will be achieved through three integrated and complementary outcomes, which are presented in detail below.

### **Component 1: Capacity development.**

**Outcome 1:** Capacities enhanced for climate-resilient planning among communities, Woreda, regional and federal governments.

LDCF project grant requested: \$ 800,000.

Co-financing: \$ 950,000.

*Output 1.1: Assessment of the capacity and resource needs of MoANR, MoLF, MoFEC, MEFCC, MoWIE and NMA at federal, regional and Woreda-level to build climate resilience.*

The proposed LDCF project will undertake comprehensive capacity and resource needs assessments to identify institutional and human capacity gaps in the integration of climate change into development planning and decision-making. In addition, opportunities will be identified for the integration of climate change information into advisory extension services at national and Woreda-levels within the MoANR, MoLF, MEFCC, MoWIE and NMA. Based upon the results of the capacity needs assessment, a short-, medium- and long-term strategy for capacity development and training programs at regional level will be developed. These interventions will strengthen institutional and technical capacity at national and Woreda-levels to integrate climate change considerations into development planning.

Indicative activities under Output 1.1 include:

- 1.1.1. Undertake a general capacity and resource needs assessment of MoANR, MoLF, MoFEC, MEFCC, MoWIE and NMA at national and Woreda-level to identify training and equipment needs for integrating climate change considerations into development planning.

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<sup>33</sup> TANGO International. 2011. PSNP Plus Final Evaluation.

<sup>34</sup> Sutter P, Frankenburger T, Downen, J, Greeley M & Mueller M. 2012. World Food Programme Ethiopia, MERET Impact Evaluation. Institute of Development Studies.

- 1.1.2. Develop short-, medium- and long-term capacity development programmes for government staff at the national, regional and community level to enhance the capacity needs identified in the above assessment through on-the-job training and engaging with local experts on climate change.
- 1.1.3. Provide technical and financial assistance – including provision of equipment – to national and Woreda government structures based on the outcome of the capacity and resource needs assessment.

*Output 1.2: Capacity development of staff from MoANR, MoLF, MoFEC, MEFCC, NMA and MoWIE at federal, regional and Woreda-level on climate change and climate-resilient planning.*

Based on the outcome of the capacity and resource needs assessment that will be conducted under Output 1.1, a capacity development programme targeting representatives at national and Woreda-levels will be implemented. The capacity development programme will also address the gaps and weaknesses identified in the implementation of the MERET programme. These include *inter alia* the integration of biological and physical soil and water conservation technologies, as well as strengthening the long-term monitoring and evaluation of land-based adaptation measures – including environmental health risks and water structures. In so doing, the project will facilitate the establishment of professional links between trainees and contribute towards the retention of skilled staff within government. The capacity development programme will also include a mentorship element. Existing training protocols and programmes will be updated based upon the needs assessment and international best practices related to CCA. Furthermore, the project will contribute to the policy environment by providing assistance for the introduction of guidelines for the integration of climate change risks and opportunities into development planning and budgeting processes. These guidelines and the increased skills and technical capacity will therefore enable national and sub-national MoANR, Ministry of Finance and Economic Development (MoFEC) and MEFCC to integrate climate change risks and opportunities into their annual/medium/long-term development plans and budgets.

Indicative activities under Output 1.2 include:

- 1.2.1. Implement a two-year capacity development programme for national, regional and Woreda-level staff from MoANR, MoLF, MoFEC, MEFCC, NMA and MoWIE – in consultation with Woreda-level extension agents – to address weaknesses/gaps in the baseline projects. The capacity development programme will include seminars, on-the-job skills training and a mentorship programme.
  - 1.2.1a. Extension agents will undertake training on tools and methods including: climate risk assessments and cost-benefit analyses.
- 1.2.2. Seminars will be conducted with government policy- and decision-makers on the economics of adaptation and climate-resilient planning.
- 1.2.3. Develop Woreda-specific short-, medium- and long-term CCA growth targets.
- 1.2.4. Provide technical assistance to MoFEC and MEFCC to develop guidelines for the integration of climate change into long-term planning and budgeting processes for Woreda-level sectoral ministries.
- 1.2.5. Hold regional workshops for national and Woreda government structures on integrating CCA into development planning processes.

*Output 1.3: Training of extension agents and local communities to integrate climate change into planning processes.*

The proposed LDCF project will assist the GoE with reviewing and updating extension service portfolios in the eight target Woredas, as well as refining strategies and policies for climate resilient technology dissemination. The focus in this output will be on staff in the Environmental Protection Authority (EPA), MoANR, MEFCC and the Climate and

Geospatial Research Directorate (CGRD) within the Ethiopian Institute for Agricultural Research (EIAR)<sup>35</sup>. All updates to the extension portfolios will ensure that the integration of technologies, such as CSA, will be sustainable and within the resource constraints of government, as well as respond to the needs of smallholders and vulnerable communities.

Extension agents will receive training on up-to-date methods for climate-smart natural resource management focusing on agricultural and ecological interventions. The agricultural interventions will include: i) CSA and livestock production; ii) integrated crop-livestock production systems; iii) conservation agriculture; iv) agroforestry; and v) sustainable water use and management including small-scale irrigation technologies. The ecological interventions will include i) soil and water conservation; ii) rangeland management; and iii) watershed restoration. Training will also be provided to relevant stakeholders who will be involved in the implementation of the project on CCA. The capacity of the EPA, MEFCC, MoANR and farmer schools to disseminate and implement improved technologies – integrating climate risks and sustainable water resources management – will also be enhanced through on-the-job training.

Indicative activities under Output 1.3 include:

- 1.3.1. Review and update the extension services portfolios within the eight target Woredas to: i) integrate climate change risks and opportunities; and ii) provide knowledge-based advice to farmers and local communities.
- 1.3.2. Train: i) extension agents; and ii) farmers, NGOs and local communities to improve the capacities of beneficiary communities in implementing CCA activities.
  - 1.3.2a. Training will focus on climate-smart land management and livelihoods, including *inter alia*: drip irrigation, crop diversification, watershed restoration, income diversification and entrepreneurship promotion.
- 1.3.3. Establish strong linkages and partnerships between farmers and extension agents through: i) on-farm trials, field days and demonstrations, as well as participatory surveys; and ii) regular meetings to review performances, identify problems, allocate roles and responsibilities, plan and coordinate the uptake of methods and technology.
- 1.3.4. Develop technical manuals and training material on agricultural and ecological interventions, as well as methods for monitoring the effectiveness thereof.

*Output 1.4: Annual knowledge-sharing forum of regional and Woreda-level sectoral experts, extension agents and community representatives.*

The proposed LDCF project will enhance coordination and linkages between stakeholders by facilitating an annual forum where regional and Woreda-level sectoral experts – from EPA, MoANR, MEFCC and NMA – extension agents and community representatives can discuss their experiences and innovations. The purpose of this forum will be to encourage dialogue between relevant line ministries, donors, NGOs and community-based organisations (CBOs), including women, youth and farmer groups. The forum will consequently be an intermediary between decision-makers and local communities, translating scientific knowledge into practical guidance for decision-makers. Furthermore, best-practices and lessons learned will be shared between stakeholders across regions as well as from other relevant and aligned projects.

Indicative activities under Output 1.4 include:

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<sup>35</sup> The Climate and Geospatial Research Directorate (CGRD) is a research programme under the Ethiopian Institute of Agricultural Research (EIAR) that is committed to “conduct research, develop and transfer climate-based decision-making support technologies and information responding to agro-ecosystem problems and opportunities to support sustainable, climate resilient agricultural development.” See: <http://www.eiar.gov.et/index.php/climate-and-geospatial-research> for further information. Accessed on 1 July 2016.



- 1.4.1. Establish a forum for sharing experiences and innovations between: i) University of Addis Ababa and other research institutions; ii) relevant line ministries including EPA, MoANR, MEFCC and NMA; iii) extension services; and iv) CBOs including women's, youth and farmer groups, within regional and Woreda government structures.
- 1.4.2. Document and disseminate information through: i) local-level awareness raising campaigns (under Output 1.4) and training programmes as well as farmer schools on lessons learned and best practices of CCA – under Output 3.2; and ii) a good practice database including traditional practices relevant to agriculture – crop and livestock, water use and management, landscape and watershed restoration under climate change conditions.
- 1.4.3. Facilitate linkages with international universities and research centres working on CCA and access to research information by: i) subscribing to newsletters and bulletins published by such institutions, as well as internet-based research portals; and ii) participating in or attending regional knowledge-sharing forums, workshops, research internships and exchange visits.

*Output 1.5: Public awareness-raising campaign and training programme for local communities –including for women and youths – on the implementation of climate-resilient adaptation interventions and diversified livelihoods.*

The proposed LDCF project will undertake awareness-raising to increase the understanding of local communities on the effects of climate change and potential CCA interventions. Local media will be integrated into awareness-raising initiatives to assist in the dissemination of information. Under this outcome, the project will also provide training to extension agents, local communities and farmers on the implementation of integrated watershed management measures, CSA techniques and CCA interventions. Conventional extension methodologies will be improved with the adoption of a “learning by doing approach” that introduces participatory experiential learning methods, including exchange visits and demonstration sites whereby farmers will be exposed to successful practices. The training will cover the construction, operation and maintenance of hard and soft engineering interventions that will be implemented in targeted communities under Output 3.2 and 3.3. Finally, best practices guides for CCA and CSA will be published in local languages to support the widespread adoption of the interventions promoted by the project.

Indicative activities under Output 1.5 include:

- 1.5.1. Conduct a public awareness campaign using local media to inform communities on the effects of climate change and benefits of appropriate CCA interventions. The campaign will include the development and dissemination of user-friendly literature on climate change adaptation and appropriate interventions.
- 1.5.2. Provide training to extension agents and farmers on adaptation techniques and approaches that are specific to CSA and integrated watershed management, including: i) cultivation of crop varieties with increased resistance to extreme conditions; ii) irrigation techniques that maximise water use; iii) adoption of supplementary irrigation in rain-fed systems and water-efficient technologies to harvest water; and iv) the modification of cropping calendars.
- 1.5.3. Hold a training workshop in each of the eight target Woredas for local communities – including farmer-farmer exchanges and visits to demonstration plots – on the construction, operation and maintenance of integrated watershed management measures, CSA techniques and livestock production practices. This training would prepare stakeholders for the implementation of Output 3.2 and 3.3.
- 1.5.4. Update the technical manual entitled “Community Based Participatory Watershed Development: A Guideline” to include climate considerations and distribute copies (with permission). This is freely available and is published by the Ministry of Agriculture and Rural Development, 2005.

## **Component 2: Climate risk information.**

**Outcome 2:** Use of climate information for climate risk management strengthened – including for women and youths.  
LDCF project grant requested: \$ 700,000.  
Co-financing: \$ 1,500,000.

*Output 2.1: A functional climate information and early warning system to monitor weather conditions.*

A specialist consultant will be hired to analyse the current climate information systems in place within the NMA at a national, regional and Woreda-level. The analysis will focus on determining the accuracy of climate data being generated in each of the four Woredas that currently have AWS in place. The frequency and accuracy of climate information dissemination to each of the eight targeted Woredas will also be assessed. Meetings will take place with regional staff in the Tigray, Amhara, Oromia and SNNPR NMA offices and with local line ministers from Woreda government structures within each of the eight targeted Woredas. Furthermore, local community groups – particularly women, farmer and youth groups – will be consulted to provide their input regarding the climate information and extent of advisory services being received. This will ensure that the needs of vulnerable groups are addressed through project activities.

AWS will be procured and installed in the four project Woredas that do not yet have any weather stations in place. In the four Woredas that do already have AWS installed, an equipment needs assessment will be conducted to ensure that the systems are functioning optimally. New equipment used to strengthen the functioning of existing AWS will be procured and installed. Technical capacity development will be provided to regional NMA staff and relevant Woreda officials on the small-scale maintenance and operation of AWS. The supplier of the AWS will be responsible for the initial maintenance<sup>36</sup> of new AWS. Thereafter, the relevant regional NMA office will take ownership of and responsibility for maintaining the AWS. Local Woreda NMA staff<sup>37</sup> will be responsible for the day-to-day maintenance and operation of AWS in each of the eight targeted Woredas.

Indicative activities under Output 2.1 include:

- 2.1.1. Conduct a gap analysis in the NMA to determine availability of climate change information and local weather forecasts to local farmers, women, youth and Woreda government structures in the eight target Woredas.
- 2.1.2. Procure and install one Automatic Weather Station (AWS) per Woreda in Dessie, Dawa Chefe, Yaya Gulele and Sebeta Awas.
- 2.1.3. Undertake an equipment needs assessment of the existing weather stations in Hawassa, Arba Minch, Atsbi and Tahtay Koraro.
  - 2.1.3a. Repair/replace equipment identified in the equipment needs assessment to improve data monitoring and transmission.
- 2.1.4. Promote local monitoring of weather and rainfall by providing low-cost plastic rain gauges to farmers and communities.
- 2.1.5. Develop protocols for data collection, monitoring and transmission by local farmers, communities, extension agents to NMA.
- 2.1.6. Develop and implement a long-term maintenance plan for the AWS and other equipment.

*Output 2.2: Community-based climate forecast and decision-making support tool.*

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<sup>36</sup> normally for the first three years of AWS operation

<sup>37</sup> In Woredas where a local NMA office is not present, the day-to-day maintenance of the AWS must be assigned to a relevant line ministry by the regional NMA office.

The LDCF project will focus on addressing the “Last Mile problem” between climate information generated by the NMA and local communities across Ethiopian highlands. To do so, principles and approaches from the CIRDA programme will be adopted.

The proposed LDCF project will strengthen the capacity of i) regional and Woreda-level NMA staff; and ii) extension agents to integrate local weather and climate information – including observations from the AWS and rainfall monitoring – into planning processes. In addition, technical support will be provided to NMA staff to integrate the local weather and climate information with ongoing satellite/station monitoring initiatives which will enable improved downscaling and forecasting for each of the eight targeted Woredas. Based upon the information generated, the extension agents in collaboration with local communities will develop short-term and seasonal decision-support tools for agricultural risk management. The development of such information products will consider both climate information and non-climate information – such as commodity and market-related prices/costs.

Early warning and quick response strategies will also be developed for climate-related events which pose threats to peoples’ lives and infrastructure – for example, regular floods threaten Arba Minch, Dessie, Dawa Chefe and Hawassa. By establishing early warning and quick response strategies that warn people of such events, evacuation and other risk reduction measures will be implemented to mitigate the risk to local communities and their livelihoods. Committees will be established comprising representatives from NMA, extension agents, CBOs and local farmers. The purpose of these committees will be to manage and monitor the effectiveness of the response strategies. In addition, they will provide input into the development of detailed risk and communication strategies for each of the eight target Woredas.

Indicative activities under Output 2.2 include:

- 2.2.1. Provide technical assistance to NMA to integrate local weather and climate information obtained from the AWS with ongoing satellite/station monitoring initiatives (ENACTS).
- 2.2.2. Prepare (or improve) downscaled daily, weekly and seasonal weather forecasts to the public, based upon the integration of local weather and climate information.
- 2.2.3. Establish monitoring and management committees including i) representatives from Woreda government structures; ii) extension agents; iii) NMA staff; iv) CBOs; and v) local farmers to effectively disseminate early warnings. These committees will periodically provide training to local communities – under Output 2.3 – on the different warning categories and the appropriate responses to be adopted.
- 2.2.4. Develop a detailed risks and hazards communication strategy for each of the eight target Woredas – based on the input of a gender specialist and – in collaboration with the abovementioned committees and local communities. These strategies will comprise: i) preferred methods of communication of potential risks and hazards per site; ii) the preferred language of warnings; iii) the description of a standardised category of warnings to be used across all means of communication; and iv) site-specific responses to be implemented by the local committees and communities for each warning category such as evacuation plans.
- 2.2.5. Develop weather-information decision-support tools – a collaboration between extension agents and farmers – combining weather and climate observations and forecasts with other non-climate information for agricultural risk management.
  - 2.2.5a. Pilot the abovementioned information products over a two-year period. Periodic evaluations should inform adjustments as well as recommendations for scaling up to areas outside of the eight target Woredas.

*Output 2.3: Capacity development of extension agents, CBOs (women’s groups, school clubs and youth groups) as well as farmers on climate information and monitoring systems.*

Technical capacity development programmes will be developed and implemented in each Woreda for stakeholders from various levels including i) regional and Woreda-level NMA staff; ii) academics from local universities; iii) CBOs; and iv) women, farmer and youth groups. These capacity development programmes will focus on developing linkages and interaction between the various stakeholders. Separate technical capacity development workshops will be held to develop the skills of Woreda-level government staff and extension agents on tailoring climate information according to the local context and needs of the local communities.

Indicative activities under Output 2.3 include:

- 2.3.1. Hold technical capacity development workshops for Woreda-level government staff and extension agents on effective tailoring of climate information and development of early warnings for local communities.
- 2.3.2. Hold workshops in each Woreda to train extension agents, local farmers and communities on the dissemination of climate information and functioning of early warning and response strategies.
- 2.3.3. Provide training to extension agents and CBOs (including schools, women's, youth and farmers' groups) on data collection, monitoring and transmission in accordance with the protocols developed under Output 2.1.
- 2.3.4. Develop and disseminate training material and guidelines on the operation and maintenance of the equipment installed under Output 2.1.

### **Component 3: Adapted livelihoods.**

**Outcome 3:** Adapted and diversified income and employment opportunities generated for local communities, with a focus on climate-smart agriculture and integrated watershed management.

LDCF project grant requested: \$ 4,482,000.

Co-financing: \$ 8,000,000.

*Output 3.1: Vulnerability assessments and integrated watershed management and landscape management plans.*

Under this output, the proposed LDCF project will support the MoWIE in undertaking vulnerability assessments, including *inter alia* ground- and surface-water assessments and monitoring at each of the eight project sites. Information generated by the vulnerability assessments and ongoing monitoring will inform adaptive management of watersheds, as well as the development of integrated watershed management and landscape management plans. The purpose of these plans is to inform the location and design of appropriate climate-smart SWC and CSA measures for implementation in each of the eight target Woredas. It is imperative that these plans consider the site-specific conditions in each Woreda to ensure that physical structures are designed appropriately. The Ministry of Health (MoH) will be consulted to ensure that the design of the SWC and water-harvesting structures does not pose a risk of spreading water-borne diseases such as malaria. Implementation of inappropriately designed physical structures has been known to cause further erosion and degradation rather than curtailing it<sup>38</sup>. See Table 1 in Annex VII for a list of suggested CSA techniques already used in Ethiopia<sup>39</sup>.

Indicative activities under Output 3.1 include:

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<sup>38</sup> Sutter P, Frankenburger T, Downen, J, Greeley M & Mueller M. 2012. World Food Programme Ethiopia, MERET Impact Evaluation. Institute of Development Studies.

<sup>39</sup> Jirata M, Grey S & Kilawe E. 2016. Ethiopia climate-smart agriculture scoping study. Food and Agriculture Organisation (FAO) of the United Nations, Addis Ababa, Ethiopia.

- 3.1.1. Undertake vulnerability assessments of eight target Woredas, including *inter alia*:
  - i) a groundwater and surface water resources assessment;
  - ii) biodiversity assessments; and
  - iii) mapping of access to irrigation and use of resilient agricultural practices.
- 3.1.2. Engage with local communities (especially women's groups and associations) in the planning and design of: i) water harvesting and storing interventions; ii) flood diversion and water spreading facilities; and iii) on-farm and off-farm soil and water conservation measures.
- 3.1.3. Prepare integrated watershed management and landscape management plans, based on the results of the vulnerability assessments and in collaboration with extension agents and CBOs. These plans are to provide details regarding the site specific location of the CCA and CSA interventions proposed under Output 3.2.
- 3.1.4. Provide technical capacity development seminars to MoWIE and Woreda-level government officials on the assessment and monitoring of ground- and surface-water resources and adaptive management of the water sector considering future climate change.
- 3.1.5. Establish and implement a groundwater monitoring strategy for each of the eight targeted catchment areas and facilitate dissemination of data to MoWIE.
- 3.1.6. Develop water management tools and guidelines for dissemination by MoWIE to extension agents and committees established under Output 2.3 and local communities.
- 3.1.7. Develop water user groups to manage the equitable use of water for farming.

*Output 3.2: Integrated watershed management across the eight target Woredas.*

Under this output, the proposed LDCF project will implement integrated watershed management measures to ensure the recovery and improved functioning of degraded watersheds under future climate change conditions. The implementation of CCA measures and CSA techniques at the watershed level will reduce soil erosion, increase soil fertility and regulate water flow during flash floods. Such interventions will mitigate the damaging effects of floods and droughts. In addition, watershed restoration and river bank treatments will increase groundwater recharge and the amount of water available for irrigation. The restoration of degraded watersheds will be supported through the provision of materials and equipment necessary for implementing flood control, water storage and runoff reduction measures.

The list of potential watershed restoration and management measures to be implemented will be developed in accordance with the integrated watershed management and landscape management plans (developed under Output 3.1) and with explicit consideration of the local socio-economic, environmental and climatic context. Consideration of site-specific variables such as rainfall is critical. Studies have shown that short-term returns from physical SWC structures are higher in drought-prone areas compared to high-rainfall areas, in which returns can be negative<sup>40</sup>. Criteria that will be considered in the design of SWC interventions will include *inter alia*: i) demonstrable effects in reducing the risk of floods and droughts; ii) clear, viable and sustainable benefits to local communities; iii) cost effectiveness; and iv) minimal maintenance requirements. The design will also consider the likely increase in frequency and severity of droughts and floods under future climate change. For example, the size of diversion canals, water harvesting structures as well as the height and width of earth embankments will be designed in accordance with the 50-100 year flood levels. In addition, SWC measures may include sediment-excluding facilities to handle the potential increase in debris as a result of climate change.

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<sup>40</sup> Pender J & Gebremedhin B. 2004. Impacts of policies and technologies in dryland agriculture: evidence from Northern Ethiopia. In: SC Rao (Ed.) *Challenges and strategies for dryland agriculture*. American Society of Agronomy (ASA) and Crop Science Society of America (CSSA) Special Publication 32. Madison: ASA and CSSA.

Natural regeneration activities – particularly planting of multi-benefit species in degraded areas – will be implemented on agricultural lands, rangelands, watershed slopes and exclosure sites. These activities will be informed by: i) the predicted effects of climate change; ii) the capacity of species to maintain provision of ecosystem goods and services under climate change conditions, such as species that are drought- or flood-resilient; and iii) community needs and preferences. Examples include: i) species that produce non-timber forest products such as fruit, fibre and fodder; ii) fast-growing species for firewood<sup>41</sup>; and iii) species that promote the growth of other vegetation. Indigenous species with multiple benefits will be prioritised in order to establish an ecosystem that is both climate-resilient and provides additional livelihood options. Refer to Annex VIII for a list of suggested plant species to be used in watershed restoration.

The proposed LDCF project will also implement CSA practices (see Table 1 in Annex VII: Suggested climate-smart agriculture (CSA) techniques) at each of the project sites based on both traditional and scientific knowledge. CSA best practices – such as mulching, intercropping with drought and flood-tolerant crops, crop rotation and changing planting schedules – will be adopted to improve agricultural productivity under current and future climate conditions. Furthermore, the dissemination of drought-resistant livestock and appropriate livestock management techniques – such as animal fattening<sup>42</sup> – will complement the environmental and economic benefits of the SWC measures to be implemented.

Agricultural productivity will be enhanced by the planting of trees and shrubs that will increase soil moisture and soil organic matter<sup>43</sup> while also diminishing the effects of heavy rains, droughts and wind storms under future climate change conditions. By incorporating fodder trees within crop fields, the project will increase the availability of fodder for livestock and reduce the dependence on degraded rangelands. Through planting fodder species and implementing SWC measures, MERET farmers have been able to produce significantly more fruit, vegetables and pulses than control farmers, generating increased income<sup>44</sup>. Economically important shrubs such as *Rhamnus prinoides* (Gesho) and legume trees with pods will also be grown. Such species include *Acacia abyssinica*, *Acacia tortilis* and *Faidherbia albida*. A list of further potential species identified during PPG phase is provided in Annex VIII: Suggested plant species for watershed restoration. The promotion of agroforestry within productive agricultural systems will: i) increase food security; ii) reduce the agricultural sector's vulnerability to climate change; and iii) increase the adaptive capacity of local communities in the Ethiopian highlands to climate change. Sites for implementing agroforestry will be identified based upon consultations with local communities with a focus on villages with: i) small farmlands; ii) small grazing lands; and iii) a large number of women-headed households.

Indicative activities under Output 3.2 include:

- 3.2.1. Develop and implement SWC measures over 8000 hectares of land across the project sites, including inter alia: i) hillside terracing; ii) establishing 800 hectares of new exclosure sites and maintaining 8000 existing permanent and seasonal exclosures; iii) planting indigenous and multi-purpose trees over an area covering 8800 hectares of degraded land; and iv) incorporation of multi-purpose trees in household woodlots and community exclosures.
- 3.2.2. Develop agricultural SWC demonstration sites in each Woreda to serve as examples for farmers.
- 3.2.3. Establish and/or upgrade existing forestry nursery sites at each of the eight project sites.
- 3.2.4. Promote natural regeneration and reforestation of degraded watersheds through, *inter alia*: i) implementing agroforestry by planting multi-purpose seedlings on farmland; ii) using a mix of drought-resistant indigenous and

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<sup>41</sup> To be planted in woodlots near homesteads rather than on watershed slopes

<sup>42</sup> Animal fattening involves a process whereby livestock are kept within an enclosed area and have fodder brought to them. Fodder used will often be supplemented with nutritious sources, such as false banana and sweet potato.

<sup>43</sup> See: Jirka et al. 2015. Climate finance and carbon markets for Ethiopia's Productive Safety Net Programme (PSNP): Executive summary for policy makers. A World Bank Climate Smart Initiative (CSI) Report. Cornell University. This report provides insights on how sequestering carbon through certain restoration techniques could leverage finances through the global carbon market.

<sup>44</sup> Sutter P, Frankenburger T, Downen, J, Greeley M & Mueller M. 2012. World Food Programme Ethiopia, MERET Impact Evaluation. Institute of Development Studies.

fast growing exotic species in community forestry initiatives; iii) expanding enclosure sites; and iv) enrichment planting with indigenous species.

- 3.2.5. Identify and implement a range of climate-smart agricultural technologies and methods in the eight target Woredas. This will include *inter alia*: i) supplying short cycle seeds of drought- and disease-resistant crop species; ii) promoting integrated crop and livestock productivity systems; iii) promoting the conservation of native fodder and crop species; iv) strengthening pre- and post-harvest technologies; v) introducing tree-planting campaigns; and vi) promoting rotational grazing, cut and carry, and reseeded of grasses to promote rangeland productivity.
- 3.2.6. Promote rainwater harvesting by treating land surfaces to decrease infiltration and make runoff available for irrigation and other uses. The runoff will be stored in closed reservoirs<sup>45</sup> to supply water in small fields, whilst ditches will be used to harvest rainwater from hillsides or gentle slopes where the soil permeability is slow.
- 3.2.7. Drill wells at the selected well-sites as determined by the groundwater assessments under Output 3.1.
- 3.2.8. Install 16 PV-pumps at the well sites in each of the eight Woredas to increase access to groundwater sources.
- 3.2.9. Install/ purchase 16 5000 litre water tanks to store pumped water at each of the well sites.

*Output 3.3: Diversified livelihoods, including animal fattening, value-addition to agricultural products and off-farm opportunities.*

The proposed LDCF project will support the implementation of additional income-generating activities to reduce the vulnerability of local communities – particularly women and youths – in the Ethiopian highlands to current and future climate change. Opportunities will be identified for creating off-farm employment and diversifying traditional livelihood opportunities. The project will identify potential income-generating activities and investigate the conditions necessary for effective local-level adoption and sustainability. Formal and informal value chains for goods and services resulting from SWC and CSA measures will be identified and analysed. The financial benefits received from value-addition will incentivise land owners to adopt SWC and CSA measures. Emphasis will be placed on activities suitable for adoption by women and female-headed households who are among the most vulnerable to climate change.

Indicative activities under Output 3.3 include:

- 3.3.1. Undertake a comprehensive analysis of market opportunities and value chains for agricultural and other products in each of the eight project Woredas from sustainable watershed and landscape management.
- 3.3.2. Provide technical and financial support – particularly to women and female headed households – for the identification and implementation of selected income-generating activities. Such activities will include the creation of opportunities for off-farm employment through the: i) expansion of irrigated agriculture, dairy and poultry farming; ii) introduction of multipurpose tree species into households such as *Rhamnus prinoides* (Gesho), *Acacia abyssinica*, *Acacia nilotica* and other trees, including fruit tree species such as apples; iii) promotion of beekeeping, honey production and beeswax harvesting; iv) promotion of small stock; and v) expansion of existing/ introduction of vegetable farming.
- 3.3.3. Training of local communities on value-addition activities, including agro-processing and marketing skills.

*Output 3.4: Strategy for monitoring, evaluating and upscaling activities, including potential for local investment by microfinance institutions (MFIs).*

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<sup>45</sup> Open water storing facilities can promote the spread of disease (such as malaria) and should be avoided. (Sutter P, Frankenburger T, Downen, J, Greeley M & Mueller M. 2012. World Food Programme Ethiopia, MERET Impact Evaluation. Institute of Development Studies.)

Participatory monitoring and evaluation of the implementation of integrated watershed management and landscape management plans – to be developed under Output 3.1 – is integral to the success of the project and continued learning and uptake of best practices that the project will generate. A cost-benefit analysis of the agricultural and ecological interventions will be undertaken to measure the impacts and analyse the effectiveness of such interventions. In addition, a strategy will be developed for scaling up lessons learned during project implementation to other Woredas outside of the project area. The lessons learned and best practices will be shared through the forum established under Outcome 1.4 to: i) inform policy- and decision-making at national and Woreda-levels; and ii) influence the implementation of the baseline projects in other parts of the country. The strengthened extension services, knowledge sharing and field visits will facilitate the replication and scaling up of watershed restoration elsewhere in Ethiopia.

To improve the upscaling potential of project activities to other Woredas and to ensure sustainability of CCA interventions, findings from existing studies and projects will be consulted to guide the development of bankable business plans. In particular, studies<sup>46</sup> will be consulted that investigate the potential for private sector engagement – from MFIs – to give CBOs access to funding for investing in larger-scale watershed restoration that would also generate profit. In order to leverage funds from MFIs, CBOs – in the form of cooperatives – will be used to represent the interests of the local communities in each Woreda. Where possible, existing CBOs will be used, however if necessary, women, farmers and youth groups will be consulted to form new, community cooperatives for the purpose of bundling products and income streams.

Bundling products generates a steadier source of income to the cooperative than would be generated for individuals. It also allows for a portion of profits to be assigned for investing in upscaling watershed restoration activities. By using CBOs as an entry point in each of the eight target Woredas, there is an increased chance of leveraging financing from MFIs. Successful leveraging of MFI financing and subsequent upscaling of restoration activities will increase the resilience of more Ethiopians to climate change, potentially uplifting the livelihoods of several communities in Woredas across the country.

Indicative activities under Output 3.4 include:

- 3.4.1. Develop a long-term M&E strategy in the eight target Woredas taking into consideration biophysical and socio-economic indicators and incorporating performance targets for project interventions.
- 3.4.2. Develop a strategy for scaling up and replicating project activities and lessons learned throughout Ethiopia based upon the results of the M&E strategy, lessons learned and project best practices.
- 3.4.3. Use the findings and best practices of this LDCF project and other aligned projects, in particular the GCF project entitled “Responding to the increasing threat of drought: building the resilience of the most vulnerable communities through climate-smart and landscape-based investments” to identify potential MFIs and private sector investors to fund cooperatives in upscaling climate-smart watershed restoration to produce additional income.
- 3.4.4. Hold capacity development workshops for Woreda government staff, extension agents and local communities on the methods to create bankable business plans for leveraging private sector finances.

Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, CBIT and co-financing; global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF)

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<sup>46</sup> Specifically, the study conducted within the GCF project entitled “Responding to the increasing threat of drought: building the resilience of the most vulnerable communities through Climate-smart and Landscape-based investments”.



The project will increase the effectiveness of the baseline being invested by the Ethiopian government in the ongoing SWC measures designed to augment water availability to increase agricultural productivity in pursuit of food security. It will do this through suggesting the mainstreaming of climate change considerations into national and sub-national development planning and budgetary processes. Furthermore, activities will be implemented that increase the resilience of local communities to future climate change by restoring watershed functionality and offering additional, income-generating activities.

In the development of the Ethiopian NAPA, multi-criteria analyses were undertaken as part of the NAPA process in order to prioritize actions according to their potential for positive effects on economic development, social capital and environmental management. As such, the actions proposed by the NAPA are not only the most urgent and most pressing, but have also been assessed to be cost-effective. The proposed LDCF project aligns with the priorities of the NAPA (see PD Section II – Development Challenge) in order to implement necessary actions that have already been identified as cost-effective.

During the PPG phase, the following cost-effective measures were identified for the project: i) implementing a participatory, integrated approach to CCA at watershed level; ii) conducting a range of training workshops, seminars and awareness raising activities for stakeholders; and iii) building on existing capacity building initiatives and physical/biological SWC and CSA measures. These measures were identified as no-regret<sup>47</sup>, tangible and cost-effective as they: i) prioritise the needs of local communities in the project design; ii) optimise the spending of project funds on meeting the needs of the local communities; and iii) ensure that the project is well understood by beneficiaries to promote project success and efficient use of finances. The costs of CCA interventions were determined through consultations undertaken at Woreda-level, as well as at community level with the involvement of local administrators. Additionally, vulnerable groups including smallholder farmers, women and unemployed youths were consulted during the PPG phase to ensure maximum benefits to all project beneficiaries for further information, please see Annex I: Baseline situation in each project Woreda; and Annex V: National Consultant's summary of consultations with women and youths.

In order to reduce costs by avoiding duplication, the proposed LDCF project will pursue active partnerships with other ongoing initiatives, including both GEF-financed projects and non-GEF projects. Moreover, existing physical SWC measures will be modified to prepare for the impacts of future climate change. This is a cost effective approach as the cost of building new structures is avoided. Additionally, the project will build on the lessons learned and best practices gathered from past and current projects (see Annex III: Baseline and aligned policies, programmes and projects for a description of baseline projects used in the design of this project). In particular, lessons from the MERET programme indicate the importance of aligning with ongoing government programmes and upscaling project activities to new areas<sup>48</sup>. The MERET programme was not closely aligned with other projects and was implemented primarily as a stand-alone project and the upscaling of interventions was therefore limited. Furthermore, insufficient monitoring and evaluation made it difficult to quantify the impact of the programme, which reduced funding prospects and upscaling opportunities. Shortages in funding ultimately forced the phasing out of the programme. The design of the proposed LDCF project ensures that the documented challenges experienced in MERET and other projects will be avoided. Cost effectiveness will also be an integral factor when designing CCA interventions within each Woreda's integrated watershed management and landscape management plans under Output 3.1. To ensure cost effectiveness, CCA interventions will be selected that

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<sup>47</sup> No-regret options are those that are justified by current climate conditions and further justified when climate change is considered, e.g. additional off-farm sources of income will provide livelihood benefits extreme weather events increase in frequency. Lim B & Spanger-Siegfried E. 2004. Adaptation policy frameworks for climate change: developing strategies, policies and measures. Cambridge University Press, Cambridge, UK pp 253.

<sup>48</sup> Sutter P, Frankenburger T, Downen, J, Greeley M & Mueller M. 2012. World Food Programme Ethiopia, MERET Impact Evaluation. Institute of Development Studies.

i) maximise climate benefits; ii) require mostly local resources for development; and iii) are inexpensive and simple to maintain. Moreover, cost effectiveness will be measured as part of the monitoring and evaluation of project activities.

The proposed LDCF project will enhance and make use of existing national, regional and Woreda-level structures where possible. Project implementation will be almost exclusively undertaken by existing government structures. This approach is particularly cost effective, as it reduces costs that would otherwise have been spent on operationalising new, stand-alone structures. Additionally, the project activities will build the capacity of the GoE for ongoing and more widespread implementation of similar CCA projects. Moreover, the size of the Project Management Unit (PMU) has been given careful consideration by stakeholders during the PPG phase – to avoid overstaffing whilst still ensuring effective management of the project – to keep costs down. The selection of existing government staff for the PMU will also ensure that finances spent on capacity development through the course of the project are a long-term investment into the functioning of the GoE – should the staff be retained within government institutions.

Importantly, the proposed LDCF project includes technical training for local communities on implementing, maintaining and monitoring project interventions. A “training the trainers” approach will be adopted whereby extension agents will undergo technical capacity building. This is a cost-effective approach as it reduces the number of beneficiaries that will undergo direct training but will also enable the project to reach a wider audience as the trainers themselves will further disseminate climate change concepts amongst local communities. The training of local communities in conjunction with the adoption of a participatory “learning by doing” approach will further promote sustainability and upscaling of the interventions beyond the lifespan of the project.

The design of the proposed LDCF project is based on best practices known to be cost-effective gathered from rigorous scientific studies and project reviews from other projects in Ethiopia. This approach will ensure that LDCF finances are used to deliver maximum socio-economic and ecological benefits to local project beneficiaries. For example, the focus on strengthening enclosure sites under Output 3.2 – in particular by planting indigenous trees and implementing site specific SWC measures and CSA practices – is based on the knowledge that such investments have intentional and additional long-term ecological and financial benefits to surrounding areas<sup>49,50</sup>. Furthermore, CSA techniques have proven to be low-input, high-value activities that reduce the vulnerability of local communities<sup>51</sup>. In Atsbi Wenberata Woreda, for example, an integrated watershed restoration project resulted in agricultural yield increases of between 60 and 100%<sup>52</sup>.

The proposed CCA interventions are known to have measurable impacts on the livelihoods of local communities in terms of income generation, improved agricultural yields and resilience to extreme weather events<sup>53</sup>. Certain short-term benefits associated with CSA will be evident during project implementation. By way of example, local communities will experience improved yields and concomitant increases in income generation from planting drought-resistant crop species. Other benefits may however only be realised up to five years after implementation begins<sup>54</sup>. Although these benefits may not be visible in the short-term, the long-term effects thereof will be realised for decades after project implementation<sup>55</sup>. For example, sites restored through the MERET programme are still being maintained by beneficiary communities over 10 years after project interventions ended. The economic and ecological benefits of the programme’s interventions are

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<sup>49</sup> Nedessa B, Ali J & Nyborg I. 2005. Exploring Ecological and Socio-Economic Issues for the Improvement of Area Enclosure Management. Oslo, Norway.

<sup>50</sup> Mekuria W, Veldkamp E, Haile M, Gebrehiwot K, Muys B & Nyssen J. 2009. Effectiveness of enclosures to control soil erosion and local community perception on soil erosion in Tigray, Ethiopia. *African Journal of Agricultural Research* 4: 365–377.

<sup>51</sup> FAO. 2011. “Climate-Smart” Agriculture – Policies, Practices and Financing for Food Security, Adaptation and Mitigation. Food and Agriculture Organisation, Rome.

<sup>52</sup> Alemayehu F, Taha N, Nyssen J, Girma A, Zenebe A, Behailu M, Deckers S & Poesen J. 2009. The impacts of watershed management on 11 land use and land cover dynamics in Eastern Tigray (Ethiopia). *Resources, Conservation and Recycling* 53: 192–198.

<sup>53</sup> Sircely J. 2016. Restoring Ethiopian highlands at scale. International Livestock Research Institute (ILRI). Addis Ababa, Ethiopia.

<sup>54</sup> Sutter P, Frankenburger T, Downen, J, Greeley M & Mueller M. 2012. World Food Programme Ethiopia, MERET Impact Evaluation. Institute of Development Studies.

<sup>55</sup> Ibid.

clearly visible as these sites have retained dense vegetative cover and have increased water availability compared with adjacent non-target areas<sup>56</sup>. By integrating future climate change considerations into the design of SWC and CSA measures, the proposed LDCF project will therefore deliver even greater long-term benefits to target areas.

#### Innovativeness, sustainability and potential for scaling up

Sustainability and scaling-up considerations are an integral part of the design of the proposed LDCF project. Measures have been taken to ensure that project activities continue beyond the duration of project implementation, with long-term benefits to all stakeholders, including the GoE and local communities. Further details are described below.

**Collaborating with communities to ensure that their needs with regards to climate change are met.** To effectively restore watersheds and create additional livelihood opportunities across the Ethiopian highlands, project beneficiaries need to be consulted and involved in all aspects of project planning and implementation. Such an approach has shown to improve the sustainability of previous projects in Ethiopia<sup>57</sup>. The design process of this project has involved consultations with stakeholders at various levels, including: i) national-level; ii) Woreda-level; iii) community-level; and iv) individual-level. Stakeholders from various entities including government, NGOs, CBOs and vulnerable groups (women and youths) have been consulted throughout the PPG phase. During these consultations, stakeholders were asked to identify the major impacts of climate change, and the activities they viewed as necessary to overcome these climate-induced problems. (See Annex VI: Stakeholder questionnaire responses; and Annex IX: National Consultant’s summary of consultations with women and youths). The needs and recommendations of stakeholders have consequently been integrated into the project design, thereby ensuring that these needs are met.

**Intensive training on CCA at various levels.** The long-term success of watershed restoration projects in Ethiopia has been underpinned by the technical, institutional and management capacity of the project stakeholders responsible for implementation<sup>58</sup>. In light of this, the proposed LDCF project will focus on building capacity, increasing awareness and improving understanding of climate change risks and opportunities amongst government staff and local communities at both national and Woreda-level. Through seminars, government officials in MEFCC, MoANR, MoWIE, MoLF, MoFEC and NMA will be exposed to CCA concepts. Policy and budgetary amendments that integrate future climate change considerations will be recommended at these seminars, thereby promoting the integration of CCA into long-term development and planning. At a Woreda-level, a “training the trainers” approach will be adopted so as to continue training of local communities beyond the project lifespan. By transferring expertise to local-level trainers – including extension agents – the capacity of local communities to implement CCA measures in farming and development practices will continue to be built through the trained agents. This knowledge transfer will also provide local communities with the necessary technical expertise to upscale adaptation interventions into other areas.

**Establishing a cross-regional knowledge-sharing forum to create long-term collaborations.** A cross-regional and multi-level<sup>59</sup> knowledge-sharing forum will be established in this LDCF project. The forum will bring together stakeholders – from different geographical locations – with different levels of experience and knowledge. It will allow for knowledge and experience sharing on project activities, enabling best practices to be shared and disseminated across project regions. By bringing together various stakeholders and providing a platform to discuss their needs and problems faced, the forum will facilitate the generation of site-specific solutions. In this way, management and implementation

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<sup>56</sup> Ibid.

<sup>57</sup> Sircely J. 2016. Restoring Ethiopian highlands at scale. International Livestock Research Institute (ILRI). Addis Ababa, Ethiopia.

<sup>58</sup> Beyene F. 2015. Incentives and challenges in community-based rangeland management: Evidence from eastern Ethiopia. *Land Degradation and Development* 26: 502–509.

<sup>59</sup> ‘Multi-level’ here refers to the varying levels of stakeholders – from farmers to Woreda-level administrators – that will be included in the cross-regional knowledge-sharing forum.

obstacles can be avoided in the most cost-effective manner, while enhancing the ability of project beneficiaries in each Woreda to meet their development targets. This forum will also enhance long-term collaboration between stakeholders and institutions, which will provide continued benefits through knowledge-sharing and partnering on aligned future projects.

**Providing guidance on developing early warnings and agrometeorological advice in response to climate change and extreme weather events.** Through Component 2 of the proposed LDCF project, the frequency and accuracy of local-level weather forecasts and climate information will be improved. Training programmes will equip extension agents to provide local communities with downscaled agrometeorological information that offers guidance and advice on response strategies to expected extreme weather events. The provision of such capacity to the targeted Woredas will allow local communities to prepare for climate change threats long after the project has ended.

**Site visits to model farms showcasing CSA practices and SWC measures.** In the MERET programme, visits to demonstration sites of successful restoration activities and CSA practices resulted in rapid upscaling of activities by farmers, including those not directly involved in the programme<sup>60</sup>. The proposed LDCF project will facilitate farmer to farmer knowledge exchange through the abovementioned forum. Periodic site visits for extension agents to successful sites from other projects will also be arranged. These measures will promote the upscaling of project activities across wider areas and amongst a larger number of people thereby increasing the sustainability of project interventions.

**Training communities on the development of business plans to ensure additional income-generating activities are implemented on a long-term basis.** Studies have shown that local communities' access to private sector finance – such as through MFIs – influences their ability to diversify livelihoods and therefore increase household income<sup>61</sup>. Training on the development of bankable business plans through Output 3.4 will empower community groups to leverage private sector finance. In so doing, local communities – including vulnerable groups such as women and the youth – will be able to invest in income-generating activities additional to those created through the proposed LDCF project. This will enable local communities to generate additional income beyond the scope of the project, further increasing their resilience to future climate change.

**Planting multi-use species that yield ecosystem goods and services.** Within enclosure sites and in woodlots around houses, indigenous multi-use tree species will be planted for commercial and domestic purposes that provide resources for decades. The value of this new, productive landscape will incentivise protection of trees by the community. Enclosure sites in Ethiopia have traditionally been associated with improved fodder availability and improved downstream agricultural yields<sup>62</sup>. Notwithstanding these benefits, the planting of climate-resilient species will have additional benefits including: i) stabilising soil to prevent soil erosion; ii) increasing infiltration, thereby raising groundwater levels; iii) mitigating against the intensity of water runoff and flood impacts; and iv) sequestering carbon in the soil.

A.2. *Child Project?* No.

A.3. *Stakeholders*

The implementation strategy for the proposed LDCF project includes extensive stakeholder participation. Details of the stakeholder participation during the PPG phase are provided in the table below. At a broad level, participation and

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<sup>60</sup> Sutter P, Frankenburger T, Downen, J, Greeley M & Mueller M. 2012. World Food Programme Ethiopia, MERET Impact Evaluation. Institute of Development Studies.

<sup>61</sup> Ibid.

<sup>62</sup> Sircely J. 2016. Restoring Ethiopian highlands at scale. International Livestock Research Institute (ILRI). Addis Ababa, Ethiopia.

representation of stakeholders will be conducted through the governance structures to be put in place by the project as outlined and depicted in the organigram in the Governance and Management Arrangements (PD Section VIII), and through the existing structures at national and local/village levels (e.g. women’s associations). A stakeholder engagement plan for the implementation phase will be developed during the project inception workshop. Stakeholders will be consulted throughout the project implementation phase to: i) promote community understanding of the project’s outcomes; ii) promote local community ownership of the project through engaging in planning, implementing and monitoring of the CCA interventions; iii) communicate to the public in a consistent, supportive and effective manner; and iv) maximise synergies with other ongoing projects.

**Table 2: Matrix of stakeholder engagement**

Outcome	Output	Stakeholder	Key responsibilities
<b>Outcome 1:</b> Capacities enhanced for climate-resilient planning among communities, Woreda, regional and federal governments.	<b>Output 1.1:</b> Assessment of the capacity and resource needs of MoANR, MoLF; MoFEC, MEFCC, MoWIE and NMA at federal, regional and Woreda-level to build climate resilience.	MoANR, MoFEC, MoLF, MEFCC, NMA and MoWIE.	<ul style="list-style-type: none"> <li>Coordinating capacity and resource needs assessment.</li> <li>Overseeing preparation of capacity development programmes.</li> <li>Facilitating communication within ministries across national, regional and Woreda-levels.</li> </ul>
	<b>Output 1.2:</b> Capacity development of staff from MoANR, MoLF; MoFEC, MEFCC, NMA and MoWIE at federal, regional and Woreda-level on climate change and climate-resilient planning.	MoANR, MoLF, MoFEC, MEFCC, NMA and MoWIE.	<ul style="list-style-type: none"> <li>Overseeing implementation of capacity development programme.</li> <li>Facilitating organisation of national, regional and Woreda-level workshops.</li> </ul>
	<b>Output 1.3:</b> Training of extension agents and local communities to integrate climate change into planning processes.	MoANR, MEFCC, MoLF, MoWIE, NMA, local communities, NGOs.	<ul style="list-style-type: none"> <li>Overseeing implementation of technical training.</li> <li>Development of technical manuals and revision of extension service portfolios to include climate change considerations.</li> <li>Facilitating field site visits.</li> </ul>
	<b>Output 1.4:</b> Annual knowledge-sharing forum of regional and Woreda-level sectoral experts, development agents and community representatives.	MoANR, MEFCC, MoWIE, NMA, MoFEC, local communities, CBOs, NGOs.	<ul style="list-style-type: none"> <li>Development of knowledge-sharing forum.</li> <li>Establishment of linkages between project coordinators and international institutions.</li> <li>Documenting and disseminating lessons learned.</li> </ul>
	<b>Output 1.5:</b> Public awareness-raising campaign and training programme for local communities – including for women and youth – on the implementation of climate-resilient adaptation interventions and diversified livelihoods.	MoANR, MEFCC, MoLF, MoWIE, NMA, Woreda Steering Committees; CBOs, local communities.	<ul style="list-style-type: none"> <li>Overseeing public awareness campaigns.</li> <li>Coordinating training on CCA measures.</li> <li>Overseeing review and production of technical training manuals on CCA interventions.</li> </ul>
	<b>Output 2.1:</b> A functional climate information and early warning system to	NMA, MEFCC, MoANR, MoWIE, extension agents,	<ul style="list-style-type: none"> <li>Overseeing the capacity and equipment needs assessment at national, regional and Woreda-level.</li> <li>Coordinating the procurement of equipment.</li> </ul>

	monitor weather conditions.	CBOs, local communities.	<ul style="list-style-type: none"> <li>• Collaborating in development of protocols for data collection, monitoring and transmission.</li> </ul>
	<b>Output 2.2:</b> Community-based climate forecast and decision-making support tool.	NMA, MEFCC, MoANR, MoLF, MoWIE, extension agents, CBOs, local communities.	<ul style="list-style-type: none"> <li>• Facilitating establishment of monitoring and management committees.</li> <li>• Facilitating development of risks and hazards communication strategies.</li> <li>• Engaging in establishing early warning systems and advise on methods of disseminating information.</li> </ul>
	<b>Output 2.3:</b> Capacity development of extension agents, CBOs (women's groups, school clubs and youth groups) as well as farmers on climate information and monitoring systems.	NMA, academic institutions, CBOs, CBOs, local communities.	<ul style="list-style-type: none"> <li>• Coordinating capacity development workshops.</li> <li>• Overseeing dissemination of training material.</li> </ul>
<b>Outcome 3:</b> Adapted and diversified income and employment opportunities generated for local communities, with a focus on climate-smart agriculture and integrated watershed management.	<b>Output 3.1:</b> Vulnerability assessments and integrated watershed management and landscape management plans.	NMA, MEFCC, MoANR, MoH, MoLF, MoWIE, NMA, extension agents, CBOs, local communities.	<ul style="list-style-type: none"> <li>• Engaging in vulnerability assessments.</li> <li>• Facilitating preparation of integrated watershed management and landscape management plans with specialist consultants.</li> </ul>
	<b>Output 3.2:</b> Integrated watershed management across the eight target Woredas.	NMA, MEFCC, MoANR, MoLF, MoWIE, NMA, extension agents, CBOs, local communities.	<ul style="list-style-type: none"> <li>• Implementing a range of climate-smart agriculture technologies and SWC measures.</li> <li>• Establishing agricultural demonstration plots at each of the project intervention sites.</li> <li>• Establishing water user groups</li> </ul>
	<b>Output 3.3:</b> Diversified livelihoods, including animal fattening, value-addition to agricultural products and off-farm opportunities.	NMA, MEFCC, MoANR, MoLF, MoWIE, extension agents, CBOs, local communities.	<ul style="list-style-type: none"> <li>• Developing and implementing a range of additional income-generating activities.</li> <li>• Engaging in market analysis for value addition to agricultural products.</li> <li>• Coordinating training workshops.</li> </ul>
	<b>Output 3.4:</b> Strategy for monitoring, evaluating and upscaling activities, including potential for local investment by microfinance institutions (MFIs).	NMA, MEFCC, MoANR, MoLF, MoWIE, extension agents, CBOs, local communities and MFIs.	<ul style="list-style-type: none"> <li>• Participating in training on business plan development.</li> <li>• Engaging in the development of upscaling and M&amp;E strategies.</li> </ul>

#### A.4. Gender Equality and Women's Empowerment.

Gender is a complex issue in Ethiopia, with the country having some of the lowest gender equality performance indicators in sub-Saharan Africa. Indeed, Ethiopia ranks 124 out of 134 countries in terms of the magnitude and scope of gender disparities<sup>63</sup>. Although women have equal rights in terms of Article 25 of the Constitution, they are still disadvantaged in terms of literacy, health, livelihoods and basic human rights – particularly access to economic

<sup>63</sup> World Economic Forum. 2015. Global Gender Gap Report, 2015. World Economic Forum, Geneva Switzerland. Available online at: <http://www3.weforum.org/docs/GGGR2015/cover.pdf>. Accessed 16 August 2016.

opportunities and decision-making. A recent study<sup>64</sup> shows that approximately a quarter of Ethiopian women are not involved in individual and family decision-making processes. Such decisions are traditionally made by their husbands. Gender equality is however incorporated in the country's legal frameworks, including the National Policy on Women (1993) and the National Poverty Reduction Strategy – which includes gender equality as one of its eight pillars.

Women disproportionately bear the burden of poverty in Ethiopia. This is largely a result of the gendered division of household labour<sup>65</sup> and the limited access to and control over resources. The majority of agricultural labour in rural communities within Ethiopia is provided by women. However, they have restricted access to resources<sup>66</sup> and community participation is usually mediated by men. In addition, the extent of their agricultural contributions are largely unrecognized. Any income that women generate – and have access to – is traditionally spent on the betterment of their families and paying for school tuition. As a result, limited to no income is spent on developing their families' resilience to climate change threats through for example, purchasing climate-resilient crops for home gardens. These aspects contribute to the vulnerability of women and girls to the negative impacts of climate change.

NGOs and development partners (including *inter alia* UNDP and USAID) are currently promoting women's decision-making powers in Ethiopia so that they play a more active role and are better able to influence personal, family and community decisions. The proposed LDCF project will therefore promote gender equality and women's empowerment within the eight target Woredas. In so doing, the project will improve access to economic opportunities as well as create opportunities for more equitable participation in society. The project will consequently build on and seek to alleviate gender issues likely to be imposed by climate change regimes on natural resource based livelihoods. With regards to livelihoods, few women have access to assets that make them eligible for the establishment of rural savings and credit cooperatives. Furthermore, they have limited skills to engage in income-generating activities. The result is that Government strategies typically cater for the needs of male farmers. Accordingly, the project will target women under Output 1.5 and Output 3.3 to participate in income-generating activities. Women will receive training on the basics of income generation as well as specific income-generating activities suitable to their location. Local development agents will provide them with continual technical support including appropriate technology, market information and business management. Furthermore, by organizing interventions through women's associations<sup>67</sup> under output 3.1, there will be greater equity of participation and influence. These interventions will influence not only land use decision-making, but negotiating control over the benefits of agricultural production too<sup>68</sup>. By promoting shared household decisions<sup>69</sup>, the project will simultaneously be promoting gender equity within the eight target Woredas.

Gender considerations will therefore be mainstreamed into the project's activities – including the various training and capacity-building programmes – to ensure that women's resilience and income-generating abilities are enhanced. Women's groups and female headed households will be targeted and technical support and advice will be sought from such groups during the project implementation period to ensure that women's needs in the target Woredas are being properly addressed. The project is strongly gender responsive and through consultations (See Annex V – National Consultant's summary of consultations with women and youths) project design, has identified and embedded

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<sup>64</sup> Central Statistical Agency Ethiopia and ICF International. 2012. Ethiopia Demographic and Health Survey 2011. Addis Ababa, Ethiopia and Calverton, Maryland, USA. Available online at: <https://dhsprogram.com/pubs/pdf/FR255/FR255.pdf>. Accessed 16 August 2016.

<sup>65</sup> which means that women are responsible for the majority of subsistence household production

<sup>66</sup> World Food Programme (WFP). 2011. The contribution of food assistance to durable solutions in protracted refugee situations: It's impact and role – Ethiopia. A Mixed Method impact evaluation.

<sup>67</sup> including *inter alia* the Alamora Women's Association, Atsbi Women's Association and Dessaies Women's Association

<sup>68</sup> I.e. household decisions to sell or retain surplus production, and the use of income generated from sales

<sup>69</sup> Such decisions may include which particular SWC measures to implement, whether to undertake intercropping and which species to be planted, and whether to retain produce for household consumption or whether to sell it.

opportunities to increase youth and female participation in the project's activities and decision-making processes. These include:

- Inclusion of youth and gender-disaggregated indicators and targets in the results framework of the project, specifically for participation at government and community training workshops, demonstration activities and in management committees.
- Targeting of gender- and youth-differentiated vulnerabilities into project interventions so that the most climate vulnerable groups within a community receive support from the project.
- Participation of stakeholders through project planning and implementation to ensure that youth and gender considerations are appropriately mainstreamed into project activities.

Please see Section VI in the Project Document – the Project Results Framework – for project indicators and targets that include gender considerations.

#### A.5 Risk.

As per standard UNDP requirements, the Project Manager will monitor risks quarterly and report on the status of risks to the UNDP Country Office. The UNDP Country Office will record progress in the UNDP ATLAS risk log. Risks will be reported as critical when the impact and probability are high (i.e. when impact is rated as 5, and when impact is rated as 4 and probability is rated at 3 or higher). Management responses to critical risks will also be reported to the GEF in the annual PIR.

Project risks					
Description	Type	Impact & Probability	Mitigation Measures	Owner	Status
Severe drought, flooding or other extreme weather events	Environmental	Projected increases in temperatures and frequency of droughts may negatively impact agricultural productivity and natural resource availability. Intense and erratic rainfall in certain areas will cause localised flooding and damage to infrastructure. This will result in an increase in food insecurity. P=5 I=4	Updated and improved site-specific climate information, forecasting and projections will be developed. Institutional capacity development and training programmes will take place focusing on changing behaviour and increasing preparedness to climate change amongst Woreda government staff, including extension agents. Downscaled and site-specific agrometeorological information and advice will be provided to local communities and farmers to prepare appropriately for extreme weather events. Furthermore, the project will adopt an ongoing learning-by-doing approach that will allow for iterative and adaptive management to prepare for dealing with extreme weather events. Lessons learned will be captured and disseminated through cross-regional knowledge-sharing forums to encourage sustainability and to reduce risks through similar	MEFCC	Increasing



			interventions elsewhere in the Ethiopian highlands. Climate-smart SWC and CSA techniques will be implemented to reduce risks of extreme weather to livelihoods and ecosystems.		
Continued decline of groundwater levels, leading to potential scarcity and competition. This could lead to possible conflict.	Environmental	The decrease in groundwater availability may negatively impact domestic, agricultural and livestock sectors. Consequently, agricultural productivity may decline, livelihoods could be negatively impacted and food security may decrease. P=4 I=4	A number of project activities – including climate-smart watershed restoration, CSA, and SWC measures – have been identified and designed to decrease the erosive power of water runoff and increase rainwater infiltration. This will recharge and maintain groundwater levels. The implementation of these project activities will therefore mitigate against this risk and reduce the probability of conflict over water resources.	MEFCC	Increasing
Institutional capacity and relationships between government departments are not sufficient to provide effective solutions to climate problems that are complex and multi-sectoral.	Organizational	Planned project interventions may not be implemented effectively. Climate change may not be mainstreamed into sectoral policies, planning, and budgeting processes. P=2 I=3	Capacity needs assessments will be undertaken to determine i) the existing linkages between government departments; and ii) the involvement of project stakeholders in decision making. The results will inform capacity development programmes. Institutional and technical capacity will be developed to support inter-departmental coordination, planning and implementation of CCA projects in Ethiopia.	MEFCC	No change
Delays in project implementation, particularly in the development of hard infrastructure.	Operational	Delays in project implementation may result in hard infrastructure not being properly implemented. P=2 I=3	Any delays in implementation will be identified on a monthly basis. The root causes of delays will be addressed through consultative meetings between the relevant participating stakeholders, WSC and Project Manager. Contentious issues will be resolved, lessons learned documented and disseminated to other Woredas so as to avoid occurrence of similar problems.	MEFCC	N/A
Price escalation and unavailability of commodities and materials.	Financial	Climate change interventions, particularly hard infrastructure interventions (such as check dams) may not be implemented. P=3 I=3	Escalating prices are beyond the control of the project. To mitigate against this risk, the project budget for infrastructural components has been developed to compensate for expected inflation. Moreover, voluntary labour contributions provided by local communities towards building SWC measures will guarantee that sufficient resources will be available to the	MEFCC	Increasing

			project. Where possible, locally available resources will be used for the construction of hard infrastructure and for the sourcing of agricultural or livestock inputs. This approach will keep costs to a minimum.		
Potential for land selected as project sites to be reassigned for alternate use by government.	Regulatory	Assignment of project sites (specifically enclosure sites) to other users or for other uses will potentially compromise the implementation of the CCA interventions in the targeted project areas. P=2 I=3	A Memorandum of Understanding on uninterrupted access to the selected project sites will be concluded between Woreda-level administrators and the PMU of the project prior to the implementation phase.	MEFCC	Increasing
Potential disruptions in communication systems	Operational	Disruptions in internet connectivity will potentially affect the management and implementation of the project. P=3 I=2	WSCs and the PMU will be in regular telephonic contact to ensure that communication over project management and implementation is clear. This will ensure that disruptions are overcome and implementation can continue.	PMU at national- and Woreda-level	Reducing

The UNDP environmental and social safeguards requirements have been followed in the development of this LDCF project. In accordance with the UNDP Social and Environmental Screening Procedure (SESP), the project is categorized as low risk and – as outlined below – is not expected to have any negative environmental or social impacts. Please see Annex F of the ProDoc for more details.

**Table 3: The SESP risks**

<b>Risk Description</b>	<b>Impact and Probability (1-5)</b>	<b>Significance (Low, Moderate, High)</b>	<b>Comments</b>	<b>Description of assessment and management measures as reflected in the Project design.</b>
Risk 1: Duty-bearers do not have the capacity to meet their obligations in the Project	I = 3 P = 2	<b>Moderate</b>	The proposed project is essentially a country-driven initiative. Therefore, Ethiopian stakeholders will be the ultimate duty-bearers.	The roles and responsibilities of each participating duty-bearer have been identified and clarified. The project will seek to fill the capacity gaps and resource needs – already identified at PPG stage – through ongoing capacity development programmes. Throughout project implementation, duty-bearers will be in regular communication with the PMU to ensure that tasks are understood and conducted effectively. Further capacity gaps will be identified and addressed through adaptive management by proposing cost effective strategies and approaches to

				addressing these needs during project implementation.
Risk 2: Rights-holders do not have the capacity to claim their rights.	I = 4 P = 2	<b>Moderate</b>	The project sites include areas in which poverty and employment are high and literacy rates are low. Therefore, the ability of individuals and groups to influence decision making is reduced.	The project will establish new and support existing community-based organisations (CBOs) that will receive training on participatory approaches to watershed management and landscape planning, as well as on climate change adaptation techniques. These activities will empower local communities to claim their rights to land and natural resources. The project will be characterised by direct participation of a variety of stakeholders at community, local government and national government levels.
Risk 3: Proposed project will involve harvesting of natural forests, plantation development, or reforestation.	I = 1 P = 5	<b>Low</b>	Conservation agriculture and agroforestry techniques will be implemented during the project. Focus will be placed on utilising indigenous species as far as possible, however in certain instances – such as woodlots – exotic species may be used.  The proposed project will promote the regeneration of degraded land through reforestation and the use of SWC measures.	Indigenous, multi-use plant/tree species will be selected. Exotic species will only be used when absolutely necessary (when no indigenous alternative is available) around homesteads for wood production and agricultural practices. Training of local communities will include education on the benefits of using indigenous, multi-use plant species rather than exotics in watershed restoration programmes.
Risk 4: The proposed project involves significant extraction, diversion or containment of surface or ground water.	I = 3 P = 4	<b>Moderate</b>	The project will construct up to 40 check dams to slow water flow and to increase groundwater recharge. Additionally, the project will construct up to 8 reservoirs to store water extracted using PV-pumps. This water would be used to run small-scale irrigation in CSA fields.	Geo-hydrological assessments and an EIA will be carried out to determine the ideal location for check dams, reservoirs and PV-pumps. In addition, communities will be consulted in the broader site selection process.
Risk 5: Outcomes of the proposed project will be sensitive or vulnerable to potential impacts of climate change.	I = 1 P = 5	<b>Low</b>	The project is targeting degraded watersheds and agri-productive lands to increase local communities' resilience to climate change.	Current and future climatic variability will be taken into account in the restoration processes. Furthermore, resilient species – particularly in the seedling and sapling stages – will be selected for agro-forestry and CSA techniques. This will promote maximum survival of species and greater vegetative coverage of soil

				surfaces compared with the use of climate-sensitive species.  “No-regret” physical SWC measures will be implemented that enable communities to thrive during harsh climatic periods as well as during optimal years.
Risk 6: Proposed project will potentially affect land tenure arrangements and/or community based property rights/customary rights to land, territories and/or resources	I = 3 P =3	<b>Moderate</b>	Existing land enclosure sites will be targeted for watershed restoration during project implementation. Upscaling enclosure sites over larger areas could influence land use opportunities.	The project will ensure that local communities – including women and landless youths – are involved in the assessments, negotiations and dialogue regarding land classification, use and planning. Vulnerable groups will be empowered to influence allocation decisions and will receive benefits from the restoration and provision of income-generating activities on communal lands.

#### A.6. Institutional Arrangement and Coordination.

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

The **Implementing Partner** for this project is the MEFCC. The Implementing Partner will be 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 **National Steering Committee** (NSC) will be responsible for making by consensus, management decisions when guidance is required by the Project Manager, including recommendation for UNDP/Implementing Partner approval of project plans and revisions. In order to ensure UNDP’s ultimate accountability, NSC decisions will be made in accordance with standards that ensure management for development results, best value for money, fairness, integrity, transparency and effective international competition. In case a consensus cannot be reached within the Board, the final decision will rest with the UNDP Programme Manager. The NSC will be comprised of individuals representing the following institutions: MEFCC (Chair); UNDP (Co-chair); MoANR; MoWIE; Ministry of Livestock and Fisheries (MoLF); MoFEC; NMA; and four regional representatives (one from each region). Meetings of the NSC will be held on a bi-annual basis. Additional meetings can be scheduled as needed. The terms of reference for the NSC are contained in Annex E.

**Woreda Steering Committee** (WSC): The proposed LDCF project will use a similar approach to that of the MERET programme<sup>70</sup> by establishing a WSC in each Woreda. The WSCs will regularly consult with relevant CBOs, farmer, women and youth groups, as well as landless women and youth to ensure that project interventions are benefitting all stakeholders.

Each of the eight Woredas will have a WSC comprising: i) the Woreda Administrator (Chair of the WSC); ii) an MEFCC representative (Secretary to WSC); iii) a Woreda Project Officer (WPO); iv) a local university representative; v) local

<sup>70</sup> In the MERET programme, Community Based Participatory Watershed Development Teams (CBPWDTs) were established. CBPWDTs were in permanent contact with development agents, local leaders, community members and Woreda line ministry representatives. Their role was to identify issues and opportunities, mobilise communities, and to plan and implement project activities.

CBO representatives (including women and youth groups); vi) an NGO representative; vii) a representative for MFIs; and viii) a sectoral representative from both from the Woreda and Kebele levels from the following government departments:

- Ministry of Environment, Forest, Climate Change;
- Land Use Administration;
- Crop Production;
- Animal Production; and
- Cooperative offices.

The WSCs will meet at least three times a year. Tasks of the WSC include the following:

- creating an environment conducive for farmers, women, unemployed youth and other vulnerable groups to set and achieve targets;
- ensuring effectiveness of project activities in converting the project sites into a climate resilient landscape;
- providing needs-driven capacity development support for women, unemployed youth and other vulnerable groups in reaching development targets;
- assisting in the formulation of bankable climate resilient investment plans by farmers, women and unemployed youth for the upscaling of project interventions;
- executing specific strategic actions such as organising competitions regarding CCA Growth Project activities among high school or undergraduate students; awarding farmers for outstanding performance; or awarding politicians for their pro-CCA Growth political work; and
- facilitating the sharing of achievements, lessons and experiences amongst stakeholders.

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 MEFCC. The additional members of the PMU will provide project administration, management and technical support to the PM as required by the needs of the individual project or PC. The PM's function will end when the final project terminal evaluation report and corresponding management response, and other documentation required by the GEF and UNDP, have been completed and submitted to UNDP (including operational closure of the project). The PMU will work closely with the NSC as well as the WSCs throughout the implementation of the project. Specific tasks of the PMU will include the following:

- ensure CCA Growth Project activities are implemented according to the set objectives;
- facilitate communication and meetings of the NSC in order to review activities achieved, and discuss activities planned for approval and implementation;
- ensure WSCs report periodically and on schedule regarding progress/performance/budget execution against the M&E framework and budget of the project;
- support Woreda Project Officers (WPOs) to collaborate with active like-minded organisations to improve and upscale project activities among farmers, women, unemployed youth and other vulnerable groups in their respective Woredas;
- hold regular meetings and other *ad hoc* meetings with the WPOs in order to discuss plans and progress, and to follow-up any concerns the WPOs or the beneficiary groups may have; and
- coordinate and liaise with other donor and government project managers to ensure that synergies are built and that there is no overlap of tasks.

The **Project Manager** (PM) will run the project on a day-to-day basis on behalf of the Implementing Partner within the constraints laid down by the Board. The PM function will end when the final project terminal evaluation report, and other

documentation required by the GEF and UNDP, has been completed and submitted to UNDP (including operational closure of the project).

A **Woreda Project Officer** (WPO) will be selected for each Woreda. The WPOs will be responsible for the annual management, accountability and general oversight on the planning, implementing, monitoring and reporting of the five-year project. Additionally, the WPOs will be responsible for developing a database of lessons learned corresponding to each component of the project. The database will provide useful information from which implementing groups and other stakeholders can benefit. WPOs will also manage annual plans and budgets as well as develop corresponding reports on progress that will be submitted to the NSC for review and feedback.

The **project assurance** role will be provided by the UNDP Country Office specifically. Additional quality assurance will be provided by the UNDP Regional Technical Advisor as needed.

The project's organisational structure is as follows:

# Project Organization Structure

Ministry of Environment, Forest and Climate Change (Implementing Entity)

## National Steering Committee

Chair: MEFCC  
Co-Chair-UNDP

Other members:  
MoANR; MoWIE; MoLF; MoFEC; NMA; Regional and zonal MEFCC replica

**Project quality assurance-UNDP**  
Mrs. Wubua Mekonnen; Program Specialist (GEF)-Climate Resilient Green Growth Unit of UNDP

**Project Management Unit**  
Project Manager; Finance and Administration Officer; Monitoring and Evaluation Officer and two drivers.

**Woreda Project Officer**  
Eight Woreda project offices: one Project Officer and one Finance Officer

### Dessie WSC

Chair Person: Woreda Administrator

Members: Dessie City Administration Agriculture, Environmental Protection and Land Administration Department; Dessie City Administration Women Affairs Office; Dessie City Administration Cooperatives Office; Dessie City Administration Youth League; MoANR replica at Dessie City Administration; MoLF replica at Dessie City Administration; MoWIE replica at Dessie City Administration; Woreda MEFCC Replica-Secretariat

### Dawa Chefe WSC

Chair Person: Dawa Chefe Woreda Administrator

Dawa Chefe Woreda Environmental Protection and Land Administration and Use Office; Dawa Chefe Woreda Women Affairs Office; Dawa Chefe Woreda Cooperatives Office; Dawa Chefe Woreda Youth League; MoANR replica at Dawa Chefe Woreda; MoLF replica at Dawa Chefe Woreda; MoWIE replica at Dawa Chefe Woreda; Woreda MEFCC Replica-Secretariat

### Yaya Gullele WSC

Chair Person: Yaya Gullele Woreda Administrator

Yaya Gullele Land Administration and Environmental Protection Office; Yaya Gullele Woreda Women Affairs Office; Yaya Gullele Woreda Cooperatives Office; Yaya Gullele Woreda Youth League; MoANR replica at Yaya Gullele Woreda; MoLF replica at Yaya Gullele Woreda; MoWIE replica at Yaya Gullele Woreda; Woreda MEFCC Replica-Secretariat

### Sebeta Awas WSC

Chair Person: Sebeta Awas Woreda Administrator

Sebeta Awas Woreda Land Administration and Environment Protection Office; Sebeta Awas Woreda Women Affairs Office; Sebeta Awas Woreda Cooperatives Office; Sebeta Awas Woreda Youth League; MoANR replica at Sebeta Awas Woreda; MoLF replica at Sebeta Awas Woreda; MoWIE replica at Sebeta Awas Woreda; Woreda MEFCC Replica-Secretariat

### Hawassa WSC

Chair Person: Hawas City Administrator

Hawassa City Administration Environmental Protection and Forest Development Office; Hawassa City Administration Women Affairs Office; Hawassa City Administration Cooperatives Office; Hawassa City Administration Youth League; MoANR replica at Hawassa City Administration; MoLF replica at Hawassa City Administration; MoWIE replica at Hawassa City Administration; Woreda MEFCC Replica-Secretariat

### Arba Minch WSC

Chair Person: Gamo Gofa Zone Administrator

Gamo Gofa Zone Environmental Protection and Forest Office; Gamo Gofa Zone Women Affairs Office; Gamo Gofa Zone Cooperatives Office; Gamo Gofa Zone Youth League; MoANR replica at Gamo Gofa Zone; MoLF replica at Gamo Gofa Zone; MoWIE replica at Gamo Gofa Zone; Woreda MEFCC Replica-Secretariat

### Atsbi Wenberta WSC

Chair Person: Atsbi Wenberta Woreda Administrator

Atsbi Wenberta Woreda Environmental Protection and Rural Land Administration and Use Office; Atsbi Wenberta Woreda Women Affairs Office; Atsbi Wenberta Woreda Cooperatives Office; Atsbi Wenberta Woreda Youth League; MoANR replica at Atsbi Wenberta Woreda; MoLF replica at Atsbi Wenberta Woreda; MoWIE replica at Atsbi Wenberta Woreda; Woreda MEFCC Replica-Secretariat

### Tahtay Koraro WSC

Chair Person: Tahtay Koraro Woreda Administrator

Tahtay Koraro Woreda Environmental Protection and Land Administration and Use Office; Tahtay Koraro Woreda Women Affairs Office; Tahtay Koraro Woreda Cooperatives Office; Tahtay Koraro Woreda Youth League; MoANR replica at Tahtay Koraro Woreda; MoLF replica at Tahtay Koraro Woreda; MoWIE replica at Tahtay Koraro Woreda; Woreda MEFCC Replica-Secretariat

## Additional Information not well elaborated at PIF Stage:

### A.7 Benefits

#### *National benefits*

Various GoE ministries, including the MoANR, MEFCC, Ministry of Water, Irrigation and Electricity (MoWIE) and the National Meteorology Agency (NMA) will benefit directly through the holding of regional seminars. All ministries at federal level have a division for specialised coordination of sectors, while at regional level, ministries are structured as independent bureaus with several divisions that mimic federal-level structure. The technical and institutional capacity of these ministries will be enhanced through these seminars, thereby enabling the integration of climate change into development planning and budgetary processes. In other countries, capacity development has been proven<sup>71</sup> to enhance government officials' knowledge of climate change concepts thereby improving their ability to integrate climate change into government budgetary processes and to leverage private sector investment into watershed management. By incorporating climate change considerations into national and sub-national development plans, climate-smart interventions will be implemented beyond the timeframe of the proposed LDCF project. Furthermore, the close involvement of government ministries in project planning and implementation will ensure that the project is aligned with national initiatives to maximise benefits at national and sub-national levels. In addition, by implementing CCA interventions, this LDCF project will support the GoE in reaching its development targets<sup>72</sup> and the SDGs.

#### *Local benefits*

At a local-level, this LDCF project will deliver adaptation benefits to vulnerable communities in eight Woredas (see Tables 1 and 2 in Annex III and Table 3 in Annex IV), across four regions, reaching ~55,000 people across the Ethiopian highlands. Climate-smart watershed restoration has three main benefits: i) natural ecological processes such as water catchment and flood mitigation are restored; ii) soil fertility is improved, thereby enabling increases in agricultural yields and iii) income-generating activities and off-farm business opportunities are created that diversify livelihood opportunities. Through the adoption of a climate-smart approach that focuses on diversifying livelihood opportunities and implementing CSA, the activities of this project will: i) increase the resilience of targeted local communities to climate change impacts; ii) increase the uptake of climate-resilient livelihood practices that are sustainable thereby placing reduced pressure on natural resources than would traditional livelihood practices; iii) establish agricultural systems that have reduced losses during drought years and even greater productivity during optimal years; and v) maximise the benefits accrued from project sites so as to provide income-generating activities that diversify livelihood opportunities.

The dissemination of early warnings and agrometeorological information to local communities in a user-friendly format will allow for climate-smart planning amongst various stakeholders. For example, such information will inform: i) agricultural planning amongst farmers in response to drought warnings; ii) flood mitigation measures by community groups in response to flood warnings; and iii) precautionary measures by livestock herders to protect livestock when heat-waves are predicted. Emphasis will be placed on improving the detail of weather forecasts and their usefulness to end-users. In particular, there will be strengthening of early warnings and rapid response strategies across the eight project Woredas. In so doing, the project will build on the Climate Information for Resilient Development in Africa (CIRDA) programme's<sup>73</sup> efforts in crossing the "Last Mile"<sup>74</sup>. In Ethiopia, the CIRDA programme is focussing on: i) upgrading the

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<sup>71</sup> The Global Mechanism of the UNCCD. 2007. Practical guide to designing integrated financial strategies for combating desertification. Rome, Italy: Global Mechanism (GM) of the UNCCD.

<sup>72</sup> such as those set in the GTP-II and CRGE

<sup>73</sup> UNDP. 2014. Strengthening climate information and early warning systems in Eastern and Southern Africa for climate resilient development and adaptation to climate change (CIRDA) – Global Project Document. United Nations Development Programme.

<sup>74</sup> The "Last Mile" is a term originating in the telecommunications and technology industries that is used to describe the technologies and processes that connect the end customer to a communications network. The Last Mile is often stated in terms of the "Last-Mile problem" because the end link between consumers and connectivity has proved to be disproportionately expensive to solve. Mills A, Huyser O, van den Pol O, Zoeller K, Snyman D, Tye N & McClure A.. 2016. UNDP Market Assessment: Revenue generating opportunities through tailored weather information products. United Nations Development Programme. Available online at: [http://www.adaptation-undp.org/sites/default/files/resources/revenue-generating-opportunities-for-tailored-weather-information-productions-undp-june-2-2016\\_0.pdf](http://www.adaptation-undp.org/sites/default/files/resources/revenue-generating-opportunities-for-tailored-weather-information-productions-undp-june-2-2016_0.pdf). [Accessed 16 August 2016]



meteorological network; ii) improving the accuracy and frequency of local weather forecasts; and iii) providing local communities with downscaled, useable weather information for informed decision making.

Through Component 2 of the proposed LDCF project, activities are designed in alignment with the CIRDA Ethiopia Programme in order to extend its reach to new Woredas. Improved climate information will enable CSA practices to be adopted that are resilient to present and future climate change. Consequently, agricultural productivity will be enhanced and day-to-day business as usual activities across various sectors – including *inter alia* tourism, business and government work – will be planned and optimised according to improved weather information.

A further benefit gained through the dissemination of early warnings will be the ability to coordinate a timely response by local communities to extreme weather events. This will reduce damage to property and loss of human lives, particularly in flood-prone project sites such as the Dessie and Arba Minch Woredas. Dissemination of early warnings and agrometeorological information will take place through monitoring and management committees which will include community groups – particularly women’s groups – who are involved in decision-making processes at community level. Involving women in the transfer of climate information will enable them to make informed decisions on running households under climate change conditions.

#### A.8 Knowledge Management.

Through consultations with stakeholders during PPG phase, the need for a cross-regional knowledge sharing forum was expressed. To meet this need, the project will establish an annual knowledge sharing forum – under Output 1.4 – to take place at a regional and Woreda level. Stakeholders – including representatives from farmers, community based organisations, women and youth groups, local administrators and extension agents – from each of the eight Woredas will be invited to attend these annual meetings. In this way, lessons learned will be shared and valuable information on the implementation of project activities will be transferred across the eight project Woredas. In terms of the design of CCA interventions under Output 3.1, a participatory approach will be followed to integrate traditional knowledge into SWC measures and CSA practices. Therefore, knowledge will be generated together with farmers, user-groups, community-based organisations and local communities in the eight project Woredas. The project will specifically support and facilitate improved access to knowledge, and the development of guidelines and tools based on action research, field demonstration and the use of traditional and scientific knowledge in the design of response strategies. Local knowledge and experiences will therefore be documented and packaged in a manner that will be accessible for use by other users elsewhere. The project will also strengthen technical capacity at the local level, thereby contributing to increased capacity of extension services to deliver climate advice to farmers. In addition, the project will improve knowledge management among targeted institutions and communities by:

- implementing a public awareness campaign under Output 1.5 to increase local communities’ knowledge on CCA concepts;
- developing climate-resilient watershed management and landscape management plans – through a participatory approach;
- establishing cross-regional, knowledge-sharing forums for facilitating dialogue on CCA, food security and water resources management;
- providing capacity development to government, CBOs and local communities on appropriate CCA interventions;
- developing training manuals targeting extension agents, farmers and CBOs;
- developing awareness-raising materials – and disseminating these materials – on CCA in targeted Woredas and elsewhere in Ethiopia; and
- developing a participatory monitoring and evaluation system for CCA interventions that are implemented.

B. Description of the consistency of the project with:

#### B.1 Consistency with National Priorities.

The Government of Ethiopia (GoE) has developed a range of policies, plans and strategies that focus on ecosystem restoration and economic development. These include *inter alia*: i) Ethiopia's National Economic Development Plan, the Growth and Transformation Plan (GTP II 2015-2020)<sup>75</sup>; ii) the National Adaptation Programme of Action (NAPA)<sup>76</sup>; iii) the Climate Resilient Green Economy (CRGE) strategy<sup>77</sup>; iv) Ethiopia's Programme of Adaptation to Climate Change (EPACC); and v) the Intended Nationally Determined Contribution (INDC) of the GoE.

The overarching objective of the **Second Growth and Transformation Plan (GTP II)** is the realization of Ethiopia's vision of becoming a lower middle income country by 2025. The GTP II therefore aims to achieve an annual average real GDP growth rate of 11 percent within stable macroeconomic environment while at the same time pursuing aggressive measures towards rapid industrialization and structural transformation. The pillar strategies of the GTP II include *inter alia*: i) the promotion of women and youth empowerment, ensuring their participation in development and ensuring them equitable benefit from the outcomes of development and; ii) building a climate resilient green economy (CRGE). The proposed LDCF project is aligned with the goals of the GTP II through the targeted capacity building of women and youth, as well as the implementation of CSA interventions to increase agricultural productivity.

The **Climate Change National Adaptation Programme of Action (NAPA)** has been developed to enable Ethiopia address her urgent and immediate adaptation needs caused by climate change and extreme weather events. The broad aims of the NAPA are *inter alia*: i) building capacity and; ii) raising public awareness on the urgency to adapt to the adverse effects of extreme weather events. The proposed LDCF project is aligned with the aims of the NAPA in building capacity within communities as well as in Woreda, regional and federal governments; as well as with the intention to supplement and improve EWS and improving targeted weather forecasts in conjunction with the NMA.

The **Climate Resilient Green Economy (CRGE)**, strategy is based on four pillars, including *inter alia*: Pillar I: improving crop and livestock production for increased food security and farmer incomes while reducing emissions and; Pillar II: protecting and re-establishing forests for economic and ecosystem services, including carbon sequestration. The proposed LDCF project is aligned with the strategy, through the implementation of CSA practices to increase agricultural outputs and the reforestation of degraded watersheds along with other SWC measures which increase the carbon storage capacity of landscapes.

The objective of the **Ethiopian Programme of Adaptation to Climate Change (EPACC)** is to contribute to the elimination of poverty and to lay the foundation for a climate resilient path towards sustainable development. The EPACC updates and replaces the NAPA, with a focus on participation across all government sectors and down to local communities. Specifically, the EPACC aims to, *inter alia*: i) involve the whole population in planning and implementation of climate change adaptation; ii) prevent land degradation and soil loss; iii) counter reductions in agricultural productivity due to climate change through effective research and development; iv) manage water effectively to ensure availability for human consumption and agricultural applications; v) ensure that gender equity is achieved; vi) develop an accessible information network on climate change; vii) develop early warning systems to alert communities of extreme weather events and; viii) mainstream awareness of climate change into development and service activities. The proposed LDCF project is aligned with the aims of the EPACC through capacity building for climate-resilience planning within communities as well as at Woreda, regional and federal government levels. Furthermore, the project aims to supplement and improve EWS and improving targeted weather forecasts in conjunction with the NMA. Finally, the proposed LCDF

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<sup>75</sup> The Second Growth and Transformation Plan (GTP II) (2015/16-2019/20) Available online at: <https://www.africaintelligence.com/c/dc/LOI/1415/GTP-II.pdf>. [Accessed 15 May 2016]

<sup>76</sup> Climate change national adaptation programme of action (NAPA) of Ethiopia. 2007. Available online at: <http://unfccc.int/resource/docs/napa/eth01.pdf>. [Accessed 15 May 2016]

<sup>77</sup> Ethiopia's Climate-Resilient Green economy strategy. 2011. Available online at: <http://www.undp.org/content/dam/ethiopia/docs/Ethiopia%20CRGE.pdf>. [Accessed 15 May 2016]

project aims to engage with communities regarding the planning and design of water harvesting and storage intervention, flood diversion and water conservation methods.

The **Intended Nationally Determined Contribution (INDC)** of Ethiopia intends to limit greenhouse gas (GHG) emissions with the target of becoming carbon neutral in the long term. The plan to limit GHG emissions is built upon four pillars including *inter alia*; Pillar 1: Improved crop and livestock production for food security and higher farmer incomes; and Pillar 2: Protecting and re-establishing forests for economic and ecosystem services, as well as carbon sequestration. The proposed LDCF project is aligned with these objectives through the promotion of CSA techniques, diversified employment opportunities and value-added agricultural outputs. Furthermore, the restoration of degraded watersheds with a focus on replanting with indigenous plant species will contribute towards to carbon capture.

The stated goal of the **Ethiopian Water Sector Policy (EWSP)** is to promote and enhance national efforts towards the equitable, efficient and optimum utilization of available water resources in Ethiopia to support significant and sustainable socioeconomic development. Objective 2 of the EWSP is the allocation of water resources based on optimum allocation principles that incorporate efficiency of use, equity of access and sustainability of water resources. Objective 4 of the EWSP aims to combat and regulate floods through sustainable mitigation, prevention and rehabilitation. The proposed LDCF project is aligned with these objectives through Component 3 in which the project aims to engage with local communities with regards to *inter alia* the planning and design of water harvesting and storage interventions, flood diversion and water conservation measures. Furthermore, the integrated management of watersheds to ensure recovery and improved functioning of degraded water sheds will regulate water availability and discharge during flash floods.

The objectives of the **National Action Plan for Gender Equality (NAP-GE)** contribute to the general objectives of the National Action Plan through *inter alia* i) increasing the economic empowerment of women and girls; ii) increasing the role and benefits of women in environmental management and protection; iii) promoting equal access to education and training for women and girls; and iv) increasing access to all levels of decision-making. The proposed LDCF project aligns with the objectives of the NAP-GE through its focus on including women in all aspects of training, public awareness and decision-making at community levels; as well as through diversified economic opportunities.

The broad goal of the **Environmental Policy of Ethiopia (EPE)** is to improve and enhance quality of life and health for the Ethiopian population and promote sustainable social and economic development through effective management and use of resources. The objectives of the EPE include *inter alia*: Objective V: improving the environment of human settlements to satisfy the needs of their inhabitants on a sustainable basis and; Objective VIII: ensuring the empowerment and participation of the people and their organizations at all levels in environmental management activities; and raising public awareness and promoting understanding of the essential linkages between the environment and development. The proposed LDCF project is aligned with these objectives through capacity enhancement for climate-resilience planning among communities, CBOs, Woreda, regional and federal governments; as well as through the promotion of adapted and diversified income opportunities with a focus on watershed management and CSA interventions.

The goal of the **National Biodiversity Strategy and Action Plan (NBSAP)** is to establish effective systems that ensure the conservation and sustainable use of Ethiopia's biodiversity, provide equitable sharing of costs and benefits and that contribute to national security and well-being. The priorities of the NBSAP are based on four strategic objectives including Strategic Objective 4: effective conservation of Ethiopia's agro-biodiversity through *in situ* and *ex situ* programmes. The proposed LDCF project is aligned with this objective through the restoration of degraded watersheds and the promotion of planting value-adding plant species with a focus on indigenous species.

The general objective of the **National Policy and Strategy on Disaster Risk Management (NPSDRM)** is to reduce disaster risks and potential damage caused by a disaster through establishing a comprehensive and coordinated disaster risk management system in the context of sustainable development. Specific objectives of the NPSDRM include *inter alia*: i) to reduce dependency on and expectations for relief aid by bringing attitudinal change and building resilience of vulnerable people and; ii) to ensure that disaster risk management is mainstreamed into development plans and programs across all sectoral institutions and implemented at all levels. The proposed LDCF project is aligned with the objectives of NPSDRM through its intention to supplement and improve EWS and improving targeted weather forecasts in conjunction with the NMA.

The main goal of **Ethiopia's Sustainable Development and Poverty Reduction Programme (SDPRP)** is to reduce poverty while maintaining macroeconomic stability. The four pillars upon which the SDPRP is based include *inter alia*: Pillar I: agricultural development-led industrialisation and; Pillar II: capacity building in private and public sectors. The proposed LDCF project is aligned with the pillars of the SDPRP through increased agricultural development through CSA interventions, as well as capacity building of communities, CBOs, Woreda, regional and federal governments.

In addition, a number of projects and programmes, which align with the objectives of the proposed Least Developed Countries Fund (LDCF) project, have been implemented. These include *inter alia*: i) Managing Environmental Resources to Enable Transitions (MERET)<sup>78</sup>; ii) The Productive Safety Net Programme - 4 (PSNP-4); iii) Sustainable Land Management Programme-II (SLMP-II); and iv) The Great Green Wall initiative (GGW) (Details of projects are provided in the PD Annex III: Baseline projects and aligned policies, programmes and projects). However, there is disparity between the objectives of these plans, policies and strategies and what has been implemented because of limited financial and technical capacity at a national and sub-national level. Furthermore, many of these plans, policies and strategies do not take into consideration climate risks and opportunities. As a result, many local communities are still at risk to climate-change threats because climate change is not integrated into development planning. There is therefore a need for climate change to be integrated into the development planning and budgetary processes across government levels in Ethiopia.

The proposed LDCF project will provide support to national and sub-national government to integrate climate risks and opportunities into policy- and decision-making, as well as design and implement climate change adaptation (CCA) interventions aimed at reducing vulnerability and building the adaptive capacity of local communities. In this context, the project will contribute to Ethiopia's National Adaptation Programme of Action (NAPA) through *inter alia*: i) Key Adaptation Need 24 – Promotion of on-farm and homestead forestry and agro-forestry practices in arid, semi-arid and dry sub-humid parts of Ethiopia; ii) Key Adaptation Need 29 – Strengthening/enhancing drought and flood early warning systems in Ethiopia; and iii) Key Adaptation Need 32 – Enhancing the use of water for agricultural purposes on small farms in arid and semi-arid parts of Ethiopia. In addition, the project will contribute to several Sustainable Development Goals (SDGs), including *inter alia*: i) SDG 8 – Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all; iv) SDG 12 – Achieve food security and improved nutrition and promote sustainable agriculture; v) SDG 13 – Take urgent action to combat climate change and its impacts; and vi) SDG 15 – Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

### **C. DESCRIBE THE BUDGETED M & E PLAN:**

The project results as outlined in the project results framework will be monitored annually and evaluated periodically during project implementation to ensure the project effectively achieves these results.

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<sup>78</sup> The MERET programme made contributions towards ecosystem restoration, but has been phased out due to shortages in funding.

Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the UNDP POPP and UNDP Evaluation Policy. While these UNDP requirements are not outlined in this project document, the UNDP Country Office will work with the relevant project stakeholders to ensure UNDP M&E requirements are met in a timely fashion and to high quality standards. Additional mandatory GEF-specific M&E requirements (as outlined below) will be undertaken in accordance with the GEF M&E policy and other relevant GEF policies<sup>79</sup>.

In addition to these mandatory UNDP and GEF M&E requirements, other M&E activities deemed necessary to support project-level adaptive management will be agreed during the Project Inception Workshop and will be detailed in the Inception Report. This will include the exact role of project target groups and other stakeholders in project M&E activities including the GEF Operational Focal Point and national/regional institutes assigned to undertake project monitoring. The GEF Operational Focal Point will strive to ensure consistency in the approach taken to the GEF-specific M&E requirements (notably the GEF Tracking Tools) across all GEF-financed projects in the country. This could be achieved for example by using one national institute to complete the GEF Tracking Tools for all GEF-financed projects in the country, including projects supported by other GEF Agencies.<sup>80</sup>

### **M&E Oversight and monitoring responsibilities:**

Project Manager: The Project Manager is responsible for day-to-day project management and regular monitoring of project results and risks, including social and environmental risks. The Project Manager will ensure that all project staff maintain a high level of transparency, responsibility and accountability in M&E and reporting of project results. The Project Manager will inform the Project Steering Committee, the UNDP Country Office and the UNDP-GEF RTA of any delays or difficulties as they arise during implementation so that appropriate support and corrective measures can be adopted.

The Project Manager will develop annual work plans based on the multi-year work plan included in Annex A, including annual output targets to support the efficient implementation of the project. The Project Manager will ensure that the standard UNDP and GEF M&E requirements are fulfilled to the highest quality. This includes, but is not limited to, ensuring the results framework indicators are monitored annually in time for evidence-based reporting in the GEF PIR, and that the monitoring of risks and the various plans/strategies developed to support project implementation (e.g. gender strategy and KM strategy) occur on a regular basis.

Project Steering Committee: The Project Steering Committee will take corrective action as needed to ensure the project achieves the desired results. The Project Steering Committee will hold project reviews to assess the performance of the project and appraise the Annual Work Plan for the following year. In the project's final year, the Project Steering Committee will hold an end-of-project review to capture lessons learned and discuss opportunities for scaling up and to highlight project results and lessons learned with relevant audiences. This final review meeting will also discuss the findings outlined in the project terminal evaluation report and the management response.

Project Implementing Partner: The Implementing Partner is responsible for providing any and all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary and appropriate. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes, and is aligned with national systems so that the data used by and generated by the project supports national systems.

UNDP Country Office: The UNDP Country Office will support the Project Manager as needed, including through annual supervision missions. The annual supervision missions will take place according to the schedule outlined in the annual work plan. Supervision mission reports will be circulated to the project team and Project Steering Committee within one month of the mission. The UNDP Country Office will initiate and organize key GEF M&E activities including the annual GEF PIR, the *independent mid-term review* and the independent terminal evaluation. The UNDP Country Office will also ensure that the standard UNDP and GEF M&E requirements are fulfilled to the highest quality.

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<sup>79</sup> See [https://www.thegef.org/gef/policies\\_guidelines](https://www.thegef.org/gef/policies_guidelines)

<sup>80</sup> See [https://www.thegef.org/gef/gef\\_agencies](https://www.thegef.org/gef/gef_agencies)

The UNDP Country Office is responsible for complying with all UNDP project-level M&E requirements as outlined in the UNDP POPP. This includes ensuring the UNDP Quality Assurance Assessment during implementation is undertaken annually; that annual targets at the output level are developed, and monitored and reported using UNDP corporate systems; the regular updating of the ATLAS risk log; and, the updating of the UNDP gender marker on an annual basis based on gender mainstreaming progress reported in the GEF PIR and the UNDP ROAR. Any quality concerns flagged during these M&E activities (e.g. annual GEF PIR quality assessment ratings) must be addressed by the UNDP Country Office and the Project Manager.

The UNDP Country Office will retain all M&E records for this project for up to seven years after project financial closure in order to support ex-post evaluations undertaken by the UNDP Independent Evaluation Office (IEO) and/or the GEF Independent Evaluation Office (IEO).

UNDP-GEF Unit: Additional M&E and implementation quality assurance and troubleshooting support will be provided by the UNDP-GEF Regional Technical Advisor and the UNDP-GEF Directorate as needed.

**Audit:** The project will be audited according to UNDP Financial Regulations and Rules and applicable audit policies on NIM implemented projects.<sup>81</sup>

### **Additional GEF monitoring and reporting requirements:**

Inception Workshop and Report: A project inception workshop will be held within two months after the project document has been signed by all relevant parties to, amongst others:

- a) Re-orient project stakeholders to the project strategy and discuss any changes in the overall context that influence project strategy and implementation;
- b) Discuss the roles and responsibilities of the project team, including reporting and communication lines and conflict resolution mechanisms;
- c) Review the results framework and finalize the indicators, means of verification and monitoring plan;
- d) Discuss reporting, monitoring and evaluation roles and responsibilities and finalize the M&E budget; identify national/regional institutes to be involved in project-level M&E; discuss the role of the GEF OFP in M&E;
- e) Update and review responsibilities for monitoring the various project plans and strategies, including the risk log; Environmental and Social Management Plan and other safeguard requirements; the gender strategy; the knowledge management strategy, and other relevant strategies;
- f) Review financial reporting procedures and mandatory requirements, and agree on the arrangements for the annual audit; and
- g) Plan and schedule Project Steering Committee meetings and finalize the first year annual work plan.

The Project Manager will prepare the inception report no later than one month after the inception workshop. The inception report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and will be approved by the Project Steering Committee.

GEF Project Implementation Report (PIR): The Project Manager, the UNDP Country Office, and the UNDP-GEF Regional Technical Advisor will provide objective input to the annual GEF PIR covering the reporting period July (previous year) to June (current year) for each year of project implementation. The Project Manager will ensure that the indicators included in the project results framework are monitored annually in advance of the PIR submission deadline so that progress can be reported in the PIR. Any environmental and social risks and related management plans will be monitored regularly, and progress will be reported in the PIR.

The PIR submitted to the GEF will be shared with the Project Steering Committee. The UNDP Country Office will coordinate the input of the GEF Operational Focal Point and other stakeholders to the PIR as appropriate. The quality rating of the previous year's PIR will be used to inform the preparation of the subsequent PIR.

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<sup>81</sup> See guidance here: <https://info.undp.org/global/popp/frm/pages/financial-management-and-execution-modalities.aspx>

Lessons learned and knowledge generation: Results from the project will be disseminated within and beyond the project intervention area through existing knowledge sharing networks and forums. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to the project. The project will identify, analyse and share lessons learned that might be beneficial to the design and implementation of similar projects and disseminate these lessons widely. There will be continuous information exchange between this project and other projects of similar focus in the same country, region and globally.

GEF Focal Area Tracking Tools: The following GEF Tracking Tool(s) will be used to monitor global environmental benefit results:

The baseline/CEO Endorsement GEF Focal Area Tracking Tool(s) – submitted as Annex D to this project document – will be updated by the Project Manager/Team (not the evaluation consultants hired to undertake the MTR or the TE) and shared with the mid-term review consultants and terminal evaluation consultants before the required review/evaluation missions take place. The updated GEF Tracking Tool(s) will be submitted to the GEF along with the completed Mid-term Review report and Terminal Evaluation report.

Independent Mid-term Review (MTR): An independent mid-term review process will begin after the second PIR has been submitted to the GEF, and the MTR report will be submitted to the GEF in the same year as the 3<sup>rd</sup> PIR. The MTR findings and responses outlined in the management response will be incorporated as recommendations for enhanced implementation during the final half of the project's duration. The terms of reference, the review process and the MTR report will follow the standard templates and guidance prepared by the UNDP IEO for GEF-financed projects available on the UNDP Evaluation Resource Centre (ERC). As noted in this guidance, the evaluation will be 'independent, impartial and rigorous'. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. The GEF Operational Focal Point and other stakeholders will be involved and consulted during the terminal evaluation process. Additional quality assurance support is available from the UNDP-GEF Directorate. The final MTR report will be available in English and will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and approved by the Project Steering Committee.

Terminal Evaluation (TE): An independent terminal evaluation (TE) will take place upon completion of all major project outputs and activities. The terminal evaluation process will begin three months before operational closure of the project allowing the evaluation mission to proceed while the project team is still in place, yet ensuring the project is close enough to completion for the evaluation team to reach conclusions on key aspects such as project sustainability. The Project Manager will remain on contract until the TE report and management response have been finalized. The terms of reference, the evaluation process and the final TE report will follow the standard templates and guidance prepared by the UNDP IEO for GEF-financed projects available on the UNDP Evaluation Resource Centre. As noted in this guidance, the evaluation will be 'independent, impartial and rigorous'. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. The GEF Operational Focal Point and other stakeholders will be involved and consulted during the terminal evaluation process. Additional quality assurance support is available from the UNDP-GEF Directorate. The final TE report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and will be approved by the Project Steering Committee. The TE report will be publicly available in English on the UNDP ERC.

The UNDP Country Office will include the planned project terminal evaluation in the UNDP Country Office evaluation plan, and will upload the final terminal evaluation report in English and the corresponding management response to the UNDP Evaluation Resource Centre (ERC). Once uploaded to the ERC, the UNDP IEO will undertake a quality assessment and validate the findings and ratings in the TE report, and rate the quality of the TE report. The UNDP IEO assessment report will be sent to the GEF IEO along with the project terminal evaluation report.

Final Report: The project's terminal PIR along with the terminal evaluation (TE) report and corresponding management response will serve as the final project report package. The final project report package shall be discussed with the Project Steering Committee during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.

#### **Mandatory GEF M&E Requirements and M&E Budget:**

GEF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget <sup>82</sup> (US\$)		Time frame
		GEF grant	Co-financing	
<b>Inception Workshop</b>	UNDP Country Office	USD 11,000		Within two months of project document signature
<b>Inception Report</b>	Project Manager	None	None	Within two weeks of inception workshop
<b>Standard UNDP monitoring and reporting requirements as outlined in the UNDP POPP</b>	UNDP Country Office	None	None	Quarterly, annually
<b>Monitoring of indicators in project results framework</b>	M&E Specialist	Per year: USD 4,000	None	Annually
<b>Monitoring of indicators in project results framework</b>	Woreda Project Officers	USD 72,000 (50% of time spent on monitoring activities)	None	Annually
<b>GEF Project Implementation Report (PIR)</b>	Project Manager and UNDP Country Office and UNDP-GEF team	None	None	Annually
<b>NIM Audit as per UNDP audit policies</b>	UNDP Country Office	Per year: USD 3,000	None	Annually or other frequency as per UNDP Audit policies
<b>Lessons learned and knowledge generation</b>	Project Manager		None	Annually
<b>Monitoring of environmental and social risks, and corresponding management plans as relevant</b>	Project Manager UNDP CO	None	None	On-going
<b>Addressing environmental and social grievances</b>	Project Manager UNDP Country Office BPPS as needed	None for time of project manager, and UNDP CO	None	Costs associated with missions, workshops, BPPS expertise etc. can be charged to the project budget.
<b>Project Steering Committee meetings</b>	Project Steering Committee UNDP Country Office Project Manager	None	None	At minimum annually
<b>Supervision missions</b>	UNDP Country Office	None <sup>83</sup>	None	Annually
<b>Oversight missions</b>	UNDP-GEF team	None <sup>83</sup>	None	Troubleshooting as needed
<b>GEF Secretariat learning missions/site visits</b>	UNDP Country Office and Project Manager and UNDP-GEF team	None	None	To be determined.
<b>Mid-term GEF Tracking Tool to be updated by (UNDP)</b>	Project Manager	USD 10,000		Before mid-term review mission takes place.

<sup>82</sup> Excluding project team staff time and UNDP staff time and travel expenses.

<sup>83</sup> The costs of UNDP Country Office and UNDP-GEF Unit's participation and time are charged to the GEF Agency Fee.




GEF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget <sup>82</sup> (US\$)		Time frame
		GEF grant	Co-financing	
<b>Independent Mid-term Review (MTR) and management response</b>	UNDP Country Office and Project team and UNDP-GEF team	USD 40,000	None	Between 2 <sup>nd</sup> and 3 <sup>rd</sup> PIR.
<b>Terminal GEF Tracking Tool to be updated by (UNDP)</b>	Project Manager	USD 10,000	None	Before terminal evaluation mission takes place
<b>Independent Terminal Evaluation (TE) included in UNDP evaluation plan, and management response</b>	UNDP Country Office and Project team and UNDP-GEF team	USD 40,000	None	At least three months before operational closure
<b>TOTAL indicative COST</b> Excluding project team staff time, and UNDP staff and travel expenses		218,000	None	

**PART III: CERTIFICATION BY GEF PARTNER AGENCY(IES)**

**A. GEF Agency(ies) certification**

This request has been prepared in accordance with GEF policies<sup>84</sup> and procedures and meets the GEF criteria for CEO endorsement under GEF-6.

<b>Agency Coordinator, Agency Name</b>	<b>Signature</b>	<b>Date (MM/dd/yyyy)</b>	<b>Project Contact Person</b>	<b>Telephone</b>	<b>Email Address</b>
Adriana Dinu, UNDP-GEF Executive Coordinator		02/22/17	Benjamin Larroquette Regional Technical Advisor	+251912503308	<a href="mailto:benjamin.larroquette@undp.org">benjamin.larroquette@undp.org</a>

<sup>84</sup> GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, SCCF and CBIT  
GEF6 CEO Endorsement /Approval Template-August2016

## ANNEX A: PROJECT RESULTS FRAMEWORK

<p><b>This project will contribute to the following Sustainable Development Goal (s):</b> SDG 8 – Promote sustained inclusive and sustainable economic growth, full and productive employment and decent work for all; SDG 12 – Achieve food security and improved nutrition and promote sustainable agriculture; SDG 13 – Take urgent action to combat climate change and its impacts; and SDG 15 – protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.</p>					
<p><b>This project will contribute to the following country outcome included in the UNDAF/Country Programme Document:</b> UNDAF Outcome: By 2020, key government institutions at national level and in all regions and cities are able to plan, implement and monitor priority climate change mitigation and adaptation actions and sustainable natural resource management.</p>					
<p><b>This project will be linked to the following output of the UNDP Strategic Plan:</b> Output 1.3: Solutions developed at national and sub-national levels for sustainable management of natural resources, ecosystem services, chemicals and waste.</p>					
	Objective and Outcome Indicators	Baseline	Mid-term Target	End of Project Target	Assumptions
<p><b>Project Objective:</b> The objective of the proposed LDCF project is to mainstream climate risk considerations into federal, regional and Woreda-level planning processes so that local communities across the Ethiopian highlands are more resilient to climate change.</p>	Indicator 1: Number of direct project beneficiaries – disaggregated by gender.	0	20,000, of which at least 50% are female.	55,000, of which at least 50% are female.	<p>All households in the target area are committed to participating in the project activities and taking-up/adopting climate resilient technologies and practices.</p> <p>Extension agents, NGOs, CBOs and local communities will be willing to adopt a participatory approach and work collaboratively to develop and implement additional income-generating activities in each of the 8 target Woredas.</p>
	Indicator 2: Cross-regional knowledge-sharing forum.	0	At least 1 regional knowledge-sharing forum held per year	At least 2 regional knowledge-sharing forums held per year	<p>The Woreda Steering Committees will be in regular communication to organize a date and location for a knowledge-sharing forum well in advance. Budgeted funds are used as planned to facilitate logistics associated with annual forums.</p>
<p><b>Component 1</b></p> <p><b>Outcome 1: Capacities enhanced for climate-resilient planning among communities, Woreda, regional and federal governments.</b></p>	Indicator 2: Cross-regional knowledge-sharing forum.	0	At least 1 regional knowledge-sharing forum held per year	At least 2 regional knowledge-sharing forums held per year	<p>The Woreda Steering Committees will be in regular communication to organize a date and location for a knowledge-sharing forum well in advance. Budgeted funds are used as planned to facilitate logistics associated with annual forums.</p>

	<p>Indicator 3: Capacities of the extension services to provide knowledge-based climate-smart advice.</p> <p>Improved score on the UNDP Capacity Scorecard from 0/1 to 3</p>	<p>Baseline estimated at a score of 1.</p> <p>Baseline to be verified during Year 1 of project implementation.</p>	<p>Capacity increased to a score of 1 – as per UNDP Capacity Scorecard. Target to be verified during Year 1 of project implementation.</p>	<p>Capacity increased to a score of 3 – as per UNDP Capacity Scorecard.</p> <p>Target to be verified during Year 1 of project implementation.</p>	<p>The Ministry of Agriculture and natural Resources and Ministry of Environment, Forest and Climate Change are committed to improving the quality of extension and advisory services. Farmers have expressed concern at the lack of up-to-date information, skills and technologies to tackle the challenges presented by climate change and variability. Both government and farmers are therefore willing and committed to finding sustainable and climate resilient solutions.</p>
	<p>Indicator 4: Percentage of targeted population awareness of predicted adverse impacts of climate change and appropriate responses (score) – disaggregated by gender.</p> <p>1 = No awareness level (less than 50% correct)</p> <p>2 = Moderate awareness level (50–75% correct)</p> <p>3 = High awareness level (over 75% correct)</p>	<p>Baseline level of awareness in target population estimated at 1 (To be verified during Year 1 of project implementation)</p>	<p>Increased level of awareness in target population (1)</p>	<p>Increased level of awareness in target population from 1 (No awareness level) to 2 (Moderate awareness level)</p>	<p>Involvement in the design and implementation of project interventions and ongoing communication on the expected benefits of CSA, SWC measures and additional livelihood options for local communities will result in long-term support of the project and adoption of new knowledge, skills and practices in food production and water management systems.</p>
<p><b>Component 2</b></p> <p><b>Outcome 2: Use of climate information for climate risk management strengthened – with a focus including for women and youths.</b></p>	<p>Indicator 5: Number of people with access to improved climate information services. (AMAT Indicator 7) – disaggregated by gender.</p>	<p>0</p>	<p>16,500, of which at least 50% are female.</p>	<p>40,000, of which at least 50% are female.</p>	<p>Regional NMA office staff and extension agents will be willing to attend training workshops and work towards furthering the existing climate and weather information systems present.</p>
	<p>Indicator 6: Operational AWS in each of the 8 target Woredas.</p>	<p>Currently 4 AWS are installed, one in each of the following Woredas: i)</p>	<p>6 operational AWS present.</p>	<p>8 operational AWS present (one in each of the 8 Woredas)</p>	<p>The NMA is committed to procuring and installing AWS in each target Woreda. The NMA staff will be responsible for the long-term upkeep and</p>

		Hawassa; ii) Arba Minch; iii) Atsbi Wenberta and iv) Tahtay Koraro			maintenance of equipment installed.
<p><b>Component 3</b></p> <p><b>Outcome 3: Adapted and diversified income and employment opportunities generated for local communities, with a focus on climate-smart agriculture and integrated watershed management.</b></p>	Indicator 7: Number of integrated watershed management and landscape management plans developed and operationalized.	Integrated watershed management and landscape management plans have not been developed	<p>At least 4 integrated watershed management and landscape management plans developed and operationalized in target areas.</p> <p>These will include:</p> <p><b>Reforestation targets</b></p> <ul style="list-style-type: none"> <li>○ 32 ha of nursery sites established</li> <li>○ 2000 ha reforested using indigenous, multi-use plant species to make up 90% of the reforested area</li> </ul> <p><b>Physical interventions</b></p> <ul style="list-style-type: none"> <li>○ 25% of total required physical interventions implemented</li> </ul> <p><b>Agricultural interventions</b></p> <ul style="list-style-type: none"> <li>○ 25% of total required agricultural interventions implemented</li> </ul>	<p>At least 8 integrated watershed management and landscape management plans developed and operationalized in target areas.</p> <p>These will include:</p> <p><b>Reforestation targets</b></p> <ul style="list-style-type: none"> <li>○ 32 ha of nursery sites established</li> <li>○ 8000 ha reforested using indigenous, multi-use plant species to make up 90% of the reforested area</li> </ul> <p><b>Physical interventions</b></p> <ul style="list-style-type: none"> <li>○ 400 km terraces</li> <li>○ 400 km trenches</li> <li>○ 1600 eyebrow basins</li> <li>○ 2000 percolation pits</li> <li>○ 40 check dams</li> <li>○ 200 gabion wall dams</li> <li>○ Two reservoirs per Woreda</li> <li>○ Two PV-pumps per Woreda</li> </ul>	Extension agents, NGOs and local communities will be willing to adopt a participatory approach and work collaboratively to develop and implement integrated watershed management and landscape management plans in each of the 8 target Woredas.

				<b>Agricultural interventions</b> <ul style="list-style-type: none"> <li>○ 6000 m<sup>2</sup> of processing facilities</li> <li>○ 800 bee-keeping packages</li> <li>○ 6000 m<sup>2</sup> of animal shelters</li> </ul>	
	Indicator 8: Number of business plans developed to promote upscaling of project interventions.	No business plans developed.	At least 4 business plans developed.	At least 8 business plans developed (one in each Woreda).	NGOs, extension agents, CBOs and local communities will work collaboratively to produce inclusive business plans that promote upscaling of watershed restoration and development of more income-generating activities.

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

STAP comments received at PIF stage	Response to comments at CEO endorsement stage
<p>1. The 9-page limit means many issues are only mentioned briefly. As UNDP knows, the proposal should provide details on the metrics that will be used to measure adaptation success; the metrics for determining that capacity development is effective; how approaches will be determined to be successful; how mentoring will be structured; how best practices will be identified; how cost-effectiveness will be evaluated; etc.</p>	<p>In the project document (PD) the units of measurement have been outlined, along with feasible targets for each of the proposed activities. Details of these indicators and targets are found in the PD in Section VI – Project Results Framework. Best practices will be identified through participatory monitoring of interventions at a community-level. Regular interaction between extension agents and farmers, along with cross-regional, annual knowledge-sharing forums, will ensure that best practices are disseminated across management levels and between project sites. The cost-effectiveness of interventions has been an integral factor in the design of the project. Consultation with communities, local administrators, managers from other aligned projects and scientific literature have guided the design of the proposed climate change adaptation interventions. Specific soil and water conservation measures and climate-smart agriculture practices will be determined during implementation under Output 3.1. This will take place following detailed hydrological and ecological studies of each project site to ensure that the most cost-effective and relevant measures are planned for each particular site.</p>
<p>2. STAP suggest including an output to plan for scaling up.</p>	<p>The PD has included a description of the upscaling strategy under Output 3.4. Details can be found in the PD under Section IV – Results and Partnerships. This is detailed further in Section V – Feasibility under the subsection iv – <i>Sustainability and Scaling Up</i>.</p>
<p>3. It also would be helpful to include consideration of the extent to which proposed activities could be resilient to a range of possible future climate and development scenarios. While reducing current vulnerability to climate variability is very important, activities also should consider what a changing climate could mean for particular practices as temperature and precipitation patterns change. UNDP could consider developing regional scenarios including emission pathways (RCPs) and shared socioeconomic pathways (SSPs) that can inform identifying adaptation options robust against a range of future climates and societal changes. Further information on the development of these new climate scenarios can be found at <a href="http://www2.cgd.ucar.edu/research/iconics">http://www2.cgd.ucar.edu/research/iconics</a>.</p>	<p>Throughout the design of the project, both current and future climate change have been considered. Additionally, the CCA interventions chosen are no-regret, ensuring that local-communities will receive maximum benefits from the project interventions, despite climate change. For each project region, future climate models have been consulted so that the proposed interventions are designed in response to expected future climate. Studies have shown that the effectiveness of the design and placement of SWC measures is dependent on several factors, including the aridity of the site. For example, terraces have been shown to be significantly more effective at increasing water infiltration in arid areas compared to humid/wet areas<sup>85</sup>. The expected changes in climate<sup>86</sup> are variable across the eight project Woredas. Therefore, the site specific future climate conditions will be taken into account when developing the integrated watershed management and landscape management plans for each Woreda under Output 3.1.</p>
<p>4. Depending on the activities undertaken, the Ministry of Health could be an important stakeholder to ensure the activities also promote population health.</p>	<p>Under Outcome 3, the proposed interventions include the construction of water-harvesting structures and the building of reservoirs to store pumped water. As recommended by STAP and the lessons learned of the MERET programme in Ethiopia, the Ministry of Health (MoH) will be consulted during the design of these structures to mitigate against the risk of spreading water-borne, or other diseases.</p>

<sup>85</sup> Sircely J. 2016. Restoring Ethiopian highlands at scale. International Livestock Research Institute (ILRI). Addis Ababa, Ethiopia.

<sup>86</sup> [http://siteresources.worldbank.org/INTAFRICA/Resources/Ethiopia\\_Country\\_Note.pdf](http://siteresources.worldbank.org/INTAFRICA/Resources/Ethiopia_Country_Note.pdf) [Accessed 16 May 2016]

<p>5. As articulated in the PIF, the large numbers of baseline projects mean close coordination will be necessary.</p>	<p>Between the PIF stage and the PPG phase, the number of baseline projects has decreased as projects have ended. However, close collaboration with other projects will still be followed during project implementation to ensure that activities are aligned. During PPG phase, a number of consultations took place with the coordinators of the various baseline and aligned projects to ensure that the proposed LDCF project aligns with the ongoing initiatives in-country (See Annex IX – list of stakeholders consulted). The management arrangement of the project, which include a representative steering committee in each project Woreda (Woreda Steering Committee), will ensure that there is close coordination with ongoing projects on the ground.</p>
<p>6. STAP welcomes the focus on women and other vulnerable groups and hopes the gender aspects will be further developed and specified in the full proposal.</p>	<p>Gender has been integrated into the design of the PD to ensure equal benefits for all. Details are outlined in the PD Section V – subsection iv – <i>Mainstreaming gender</i>. Additionally, the project indicators and targets (outlined in Section VI – Project Results Framework) are gender disaggregated. Thus, through monitoring and evaluation, the impact of the project on the livelihoods of women will be recorded so as to guide the design of future projects.</p>



**ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS<sup>87</sup>**

A. Provide detailed funding amount of the PPG activities financing status in the table below:

PPG Grant Approved at PIF:			
<i>Project Preparation Activities Implemented</i>	<i>GETF/LDCF/SCCF/CBIT Amount (\$)</i>		
	<i>Budgeted Amount</i>	<i>Amount Spent To date</i>	<i>Amount Committed</i>
Project scope and strategy defined, and GEF full proposal documentation prepared and approved. The following PPG Activities have been completed: <ul style="list-style-type: none"> <li>• Collected and compiled baseline/situational analysis</li> <li>• Conducted capacity assessment of key stakeholders</li> <li>• Conducted vulnerability assessment</li> <li>• Conducted Gender Analysis and prepared action plan</li> <li>• Conducted stakeholder consultations</li> <li>• Developed project document</li> </ul>	100,000	64,585.13	35,414.87
<b>Total</b>	<b><u>100,000</u></b>	<b><u>64,585.13</u></b>	<b><u>35,414.87</u></b>

<sup>87</sup> If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent fund, Agencies can continue to undertake the activities up to one year of project start. No later than one year from start of project implementation, Agencies should report this table to the GEF Secretariat on the completion of PPG activities and the amount spent for the activities. Agencies should also report closing of PPG to Trustee in its Quarterly Report.  
 GEF6 CEO Endorsement /Approval Template-August2016

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

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