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Ethiopia

Capacity Building on Climate Change Financing

Report of the DESA project, "Strengthening the capacity of least developed countries to develop evidence-based, coherent and well financed strategies to implement the 2030 Agenda"

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List of Abbreviations

AF	Adaptation Fund
AGP	Agricultural Growth Programme
AfDB	African Development Bank
BAU	Business-As-Usual
CIF	Climate Investment Funds
COP	Conference of the Parties
CO2e	Carbon dioxide equivalent
CPI	Climate Policy Imitative
CRGE	Climate Resilient Green economy
CSA	Central Statistics Agency
FDRE	Federal Democratic Republic of Ethiopia
EFCCC	Environment Forest and Climate Change Commissions
FEWS-NET	Famine Early Warning System-Network
GCF	Green Climate Fund
GDP	Gross Domestic Product
GEF	Global Environment Facility
GGGI	The Global Green Growth Institute
GLI	Green Legacy Initiative
GoE	Government of Ethiopia
GTP	Growth and Transformation Plan
GHG	Greenhouse Gases
ISN	International Support Measures/Mechanisms
IIED	International Institute for Environment and Development
IPCC	Intergovernmental Panel on Climate Change
LDC	Least Developed Countries
LDCF	Least Developed Countries Fund
MEDAC	Ministry of Economic Development and Cooperation
MoF	Ministry of Finance
MoFA	Ministry of Foreign Affairs
MoFED	Ministry of Finance and Economic Development
MoWIE	Ministry of Water, Irrigation and Energy
NAP- ETH	National Adaptation Plan Ethiopia
NDC	Nationally Determined Contribution
ODA	Overseas Development Assistance
PA	Paris Agreement
PDC	Planning and Development Commission
PSNP	Productive Safety Net Programme
REDD	Reducing Emission from Deforestation and Forest Degradation
SCCF	Special Climate Change Fund
SLMP	Sustainable Land Management Programme
SRAPs	Sector Reduction Action Plans
10YDP	Ten Year Development Plan
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
WB	World Bank

Abstract

The existential and potential adverse impacts of the climate change have called for the global actions. The UNCCC served as the basis for the establishment of an LDC work programme by the Conference of the Parties in 2001 to support flexible provisions extended to the LDCs under the Convention and the Paris Agreement. Ethiopia is one of the countries least responsible for the global climate change and most vulnerable to its impacts. According to Ethiopia's National Adaptation Program of Action, the agricultural, water resources, and human health sectors will be most negatively impacted by climate change, followed by the infrastructure sector. The future climate variability and change are expected to worsen the adverse impacts of climate change on agriculture and food security. A multitude of actors are involved in directing climate finance to developing countries, both to support low-carbon development and to help countries adapt to the severe impacts that are already being felt. Ethiopia has setup a national financial mechanism called the CRGE Facility Secretariat to support the implementation of the priorities set out in the CRGE Strategy and the development and implementation of CRGE Investment Plans. The Facility is based and managed by MoF with the technical support from the EFCCC. The Facility is an institutional set up that mobilizes and manage domestic and international climate finance to support the institutional capacity building and implementation of the country's climate change adaptation and mitigation projects.

The updated NDCs has brought an ambitious, economy-wide and forward looking climate response and action estimating USD$ 316 billion investment plan; of which 80% is conditional and expected to raise primarily from the international climate finance sources. Comparison with other African Countries indicates that Ethiopia has relatively mobilized higher resources from the GEF and GCF. However, considering the population size of the constituencies and per capita share, Ethiopia remained far behind that calls for a comprehensive capacity development efforts for increasing access to climate finance from multilateral, bilateral and private sector financing vehicles.

The capacity building initiatives that address gaps in developing well-formulated project proposal, tracking and reporting and mastering and adhering to the stringent requirements of the various financing mechanism are central in enhancing Ethiopia's position to access increased climate finance from the international support mechanisms. Likewise, remaining a forerunner in the climate change response actions, translating NDCs into well-grounded investment programmes and considering strengthening the CRGE facility or the option of establishing Climate Investment Facility with broader scope and mandate are highly recommended.

1. Introduction

The impacts of the climate change are extending well beyond an increase in temperature, rather affecting the ecosystem and becoming life-threatening. All aspects of human life which we depend upon such as water, energy, transport, wildlife, agriculture, ecosystem and human health are experiencing and vulnerable to the effects of climate change. The changing environment is expected to increase its negative consequences and disruption to human life and the ecosystem causing more heat stress, diseases, food system distractions and so on. Countries and governments are recognizing the threats and impacts of climate change well ever before and coming together to address and respond to the causes and effects of climate change in more coordinated and collective manners at local, national, regional and global levels.

The United Nations Framework Convention on Climate Change (UNFCCC secretariat) is the United Nations entity established in 1992 and tasked with supporting the global response to the threat of climate change. The Convention has almost universal membership (197 Parties) and is the parent treaty of the 2015 Paris Agreement and 1997 Kyoto Protocol. The ultimate objective of all three agreements under the UNFCCC is to "stabilize greenhouse gas concentrations in the atmosphere at a level that will prevent dangerous human interference with the climate system", in a time frame which allows ecosystems to adapt naturally and enables sustainable development.

The Paris Agreement formally acknowledges the urgent need to scale up our global response to climate change, which supports even greater ambition from governments. At the United Nations climate change conference in Paris, COP 21, and governments agreed that mobilizing stronger and more ambitious climate action is urgently required to achieve the goals of the Paris Agreement. Action must come from governments, cities, regions, businesses and investors. Everyone has a role to play in effectively implementing the Paris Agreement, keeping the global average temperature rise this century as close as possible to 1.5 degrees Celsius above pre-industrial levels.

a. Overview

Adverse impacts of anthropogenic climate change on human lives are well noted by series of Intergovernmental Panel on Climate Change (IPCC) and many other reports on climate change mitigation and adaptation actions. The Least Developed Countries (LDCs) are the most vulnerable ones to climate change, yet the least prepared and capable to adapt. They lack the technical, financial, and institutional capacity to adapt and mitigate towards building resilience to adverse climate change impacts.

To this end, the United Nations Framework Convention on Climate Change (UNFCCC) states that "the Parties shall take full account of the specific needs and special situations of the least developed countries in their actions with regard to funding and transfer of technology" (art. 4, paragraph 9). Furthermore, the Copenhagen accord (COP15) in December 2009 declares the "immediate establishment of a mechanism to enable the mobilization of financial resources from developed countries" to support efforts to reduce emissions from deforestation and forest degradation and enhance forest sinks. Towards mitigating global warming, the Paris Agreement (COP 21) in December 2015 also declares to limit global warming to well below 2, preferably to 1.5 degrees Celsius in this century, compared to pre-industrial levels, and reach to net zero emission by 2050. More importantly, the PA has recognized the need to make financial flows consistent with a pathway towards low greenhouse gas emissions and climate -resilient development.

The existential and potential adverse impacts of the climate change have called for the global actions. The UNFCCC served as the basis for the establishment of an LDC work programme by the Conference of the Parties in 2001 to support flexibility provisions extended to the LDCs under the Convention and the Paris Agreement. Likewise, the subsequent declarations and agreements have complemented and leveraged the establishment of local and international support mechanisms and funding to climate change adaptation and build resilience against the adverse impacts of climate change.

Towards supporting the LDC work programme on climate change strategies and national initiatives, the convention came up with several financing vehicles for LDCs to address climate change challenges. These include among others: (A) **The Global Environment Facility (GEF)** which is established in 1992 to help tackle global environmental problems. It administers several funds, helping developing countries and countries with economies in transition to meet the objectives of the international environmental conventions and agreements; (B) **The Least Developed Countries Fund (LDCF)** which is established in 2001 to support the LDC work programme, including the preparation and implementation of NAPAs. It is operated by the GEF; (C) **The Adaptation Fund** which is established under the Kyoto Protocol of the UN Framework Convention on Climate Change, and since 2010 has committed US$ 783 million to climate adaptation and resilience activities, including supporting 115 concrete adaptation projects, with over 27 million total direct and indirect beneficiaries; (D) **Green Climate Fund (GCF),** established in 2010, is mandated to invest 50% of its resources to mitigation and 50% to adaptation in grant equivalent. At least half of its adaptation resources must be invested in the most climate vulnerable countries (SIDS, LDCs, and African States). The GCF programming strategy recognizes that we must scale up both mitigation and adaptation efforts equally. GCF aims to leverage synergies and maximize potential trade-offs between adaptation and mitigation. (E) **The Special Climate Change Fund (SCCF)** was established under the Convention in 2001 to finance projects relating to: adaptation; technology transfer and capacity building; energy, transport, industry, agriculture, forestry and waste management; and economic diversification. This fund should complement other funding mechanisms for the implementation of the Convention.

These multilateral financing channels are not the only sources that are available for LDCs. There are other multilateral, bilateral support and private sector investment, particularly in the area of agricultural development in the context of the climate change mitigation, are available to assist LDCs to reduce vulnerability and increase resilience.

b. The Scope and Objectives of the Assessment

Climate finance flows and coordinated efforts at local, national and global levels are critical to maintaining the momentum of the Paris Agreement. Multilateral, bilateral and private sector financing instruments are set for responding to the climate change and supporting climate change adaptation and mitigations interventions at various levels. Countries are expected to develop institutional, policy and operational frameworks and arrangements to effectively access and utilize those climate finance mechanisms to the best of their capacity. Despite progress made on capacity to access increased climate finance, there are indications that many countries have capacity gaps to increase access and utilization to those climate support funding mechanisms from international sources (UNFCCC 2019).

This assessment is designed to contribute to building the capacity of developing countries to mobilize funding for sustainable development. It aims to support capacity building activities by identifying the capacity gaps to increased access to climate finance for Ethiopia from the international support measures (ISMs), with particular focus on agriculture and forest sectors. The scope of the assignment will particularly focus on climate financing in the agriculture and forest sector development which are critical element and major contributors of the national Green House Gas (GHG) emission, major share of the national GDP and the country's overall Climate Resilient and Green Economy and development financing strategy. For these sectors, this review analyzes financing opportunities and gaps, and recommends capacity building interventions to enhance access to international support funds for climate change responses. Overall, the objectives of this exercise and capacity building support are two folds: (a) To identify capacity gaps and challenges to contribute to building the capacity of relevant government officials/experts to mobilize increased international financing for addressing climate change challenge, and (b) To conduct capacity building activities on international support measures (ISMs) for climate finance for Ethiopia, focusing on Agriculture, food security and forest sectors. As required, it provides a step-by-step training guide or orientation on the fundamentals for project preparation to the relevant government officials or experts, either virtually or in-person.

1.3 Methodologies for Data Collection and Analysis

The assessment employed a combination of methodological approach consisting of consultations with the key stakeholders, systematic literature and desk review, and capacity development and system thinking analytical tools. The primary method employed was desk review on the climate financing proposals, strategic documents and reports, trends, guidelines and requirements of international climate finance, the financing gaps, the updated NDC report and capacity gaps and need for effective resource mobilization and implementation of climate change actions.

2. Highlights on Ethiopia's Climate Change Vulnerability related to Agriculture and Food Security

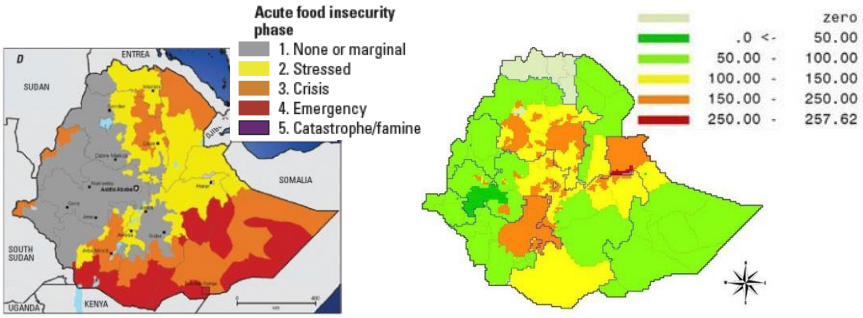
With a population growth rate of 3.02%, Ethiopia is crossing 118 million people in 2021 (World Population Review, 2021).The rate of poverty has declined from 29.6% in 2010/11 to 23.5% in 2019/20 (PDC, 2021).The country has set a target to reach lower-middle-income status by 2025. The government has launched a new 10-year perspective plan which will run from 2020/21 to 2029/30. The plan aims to sustain the remarkable economic growth with Climate Resilient and Green Economy (CRGE) strategy.

Ethiopia as agrarian nation whose economic sector is dominated by subsistence and small scale traditional farming and agricultural systems, is highly vulnerable to climate change induced hazards, namely rainfall variability, major droughts, floods and consequent land degradation that put the population at risk to food and water shortages. The key sectors that are highly linked and negatively impacted by climate variability and GHG induced global warming include agriculture, water resources, transport and energy. The adverse impact of global warming on the agriculture and water resources lead to a decline in agricultural production and productivity. Drought, flood, storm and other climate induced severe climate events are seriously disrupting the food production and supply system and peoples' access to adequate and timely nutritious and healthy food.

Agriculture remains by far the most important sector in the Ethiopian economy. The sector directly contributes to over 80% of employment and livelihood activities of the population, and accounts for about 40% of the country's GDP. In addition, agriculture related activities account over 80% of export earnings and supply around 70% of the raw material requirement of agro-based domestic industries. The agriculture sector underpins national food security and plays a key role in Ethiopia's overall socio-economic development.

Ethiopia's vulnerability to climate change caused food insecurity and loss and damages of household assets have been reported in several studies (e.g. Biraraw et al 2015; FEWS Net, 2018a; FEWS NET, 2018b). According to these reports, the factors that cause food insecurity to occur persistently in Ethiopia, are recurrent droughts, flooding, rapid population growth, land resource degradation (loss of soil fertility), conflict, agricultural production fluctuations, low non-farm employment, low incomes, regional fragmentation of markets, low level of farm technology, low level of health and sanitation education & facilities, inadequate basic education, poor governance etc. The recurrent drought events as manifested by famines of the 1950s, 1970s, 1980s, 1990s, and the recent ones 2014-2018 have substantially reduced the country's food crop and livestock production and caused substantial loss of life, livestock and livelihood (MEDAC, 1996). The following map depicts the food insecurity and vulnerability situation across the various parts of the country.

Figure 1: Map of food insecurity based on food availability (left) and consumption (right)



Source: USGS (2012) *Source: The British Geographer (2006): Spatial patterns of food.*

Source: Climate Change Profiles | Publication | Government.nl (2019)

Others reported (FEWS NET.2018a,b) that drought in 2016 and 2017 with seasonal rainfall below average drove large-scale livestock deaths in many pastoral areas of south eastern Ethiopia; and this made the livestock holdings, surface water availability, pasture/ browse availability and milk production to remain below average even during the following most favorable season in 2017, when the cumulative rainfall totals were above average. The same study indicated that during wet season heavy rains resulted in flash floods in most western and eastern zones of Somali Region, as well as in Bale Zone of Oromia; and these floods have resulted in loss of life, market disconnections, and the displacement of limited numbers of people.

Over the past three decades, Ethiopia has experienced countless localized drought events and seven major droughts, five of which resulted in famines. Future climate variability and change are expected to worsen these conditions, potentially accelerating already high levels of land degradation, soil erosion, deforestation, loss of biodiversity, desertification, recurrent floods, as well as water and air pollution. Recurrent droughts and floods pose the greatest threat to local populations. According to NAP-ETH, the agricultural, water resources, and human health sectors will be most negatively impacted by climate change, followed by the infrastructure sector.

Ethiopia is heterogeneous, in terms of topography and climate zones, and in social, cultural and economic characteristics. The degree of vulnerability of different localities and their livelihoods varies accordingly. Climate change will have significant economic effects on the Ethiopian economy, and on the agricultural sector in particular

due to factors such as the loss of arable land due to shifting agro-ecological zones, altered growing cycles that delay planting, and increased incidence of pests and diseases. Ethiopia's livestock sector will be increasingly affected by drought and degradation of land. It has been estimated that climate change will affect the country's GDP growth by 0.5-2.5 percent per year in the near future with the potential reduction of GDP up to 10 percent by 2045 primarily through impact on agricultural productivity (MFAN, 2018). Another study found that about USD 2 billion will be lost in the agricultural sector in the next few years due to rainfall variability alone – equal to 32.5% of current Real Agricultural GDP (MFAN, 2018).

An integrated vulnerability assessment on climate change effects in Ethiopia's regional states found that the top four vulnerable states are Afar, Somali, Oromia, and Tigray. These states are all heavily agriculture-dependent and belong to the poorest ones in the country: 90% of all people in Tigray and Afar and 60-70% of those in Oromia and Somali live on less than USD 2 per day (MFAN, 2018). Eshetu *et al* 2018 elaborated the vulnerability of Ethiopia to climate change induced food insecurity in terms of linking the determinant factors of food security with key development and natural resources. Accordingly, determinant factors that have been affected by the changing climate and subsequent extreme weather events include among others: food production and productivity; market, road and transport infrastructure; water availability; food safety and hygiene during harvesting and post-harvest storage; income and purchasing power. Besides, extreme weather events are known as potential disaster risk hazards causing substantial losses and damages to human lives and properties (such as crops, livestock, roads and power generation and transmission infrastructures). Furthermore, increases in atmospheric CO2 are anticipated to have adverse effect on food and nutrition security. Highlights of Ethiopia's vulnerability to climate change related food security and agriculture are presented in Table 1.

Table 1: The Agriculture and food security sector vulnerability to climate change

Climate change impacted determinant factors of agriculture, food & nutrition security	Description of climate change impacts on agriculture, food and nutrition determinant factors	Pillars and determinants of food and nutrition security adversely impacted by climate change			
		Food availability	Stability of supply and access:	Physical and economic access	Food utilization
Food production and productivity	Highly impacted because: occurrences of erratic temperature and precipitation affects the land suitability for agriculture production (crop & fodder production); and these reduce the level of food production and GDP leading to creating more price instability & more food- & nutrition-insecurity than the situation under normal climatic conditions.	Highly impacted because: Food availability is hardly self-sufficiency for everyone, particularly during the years when extremes weather events cause substantial decline in national or local level food production	Highly impacted because: Reduced food production and household incomes during extreme weather events could cause food price fluctuations at national and local level, and hence communities could not afford inflated food price, and hence stability of food supply became challenging.	Highly impacted because: Reduced food production and productivity leading to a decline in GDP and household income that would result in a decrease in food purchasing power which also includes costs of transport, marketing and infrastructure.	Highly impacted because: Climate change induced extreme events such as drought and floods are decreasing genetic diversity of crops, leading to negative impacts on food production and nutrition quality

Market, road and transport network infrastructure	Road and transport Infrastructure are influenced by changes in temperature and precipitation. Climate change results in greater damage to roads causing greater maintenance costs and reduced road and market network. The ultimate outcome is poor access to food and unaffordable food price fluctuations.	Highly impacted because: Food availability for everyone, particularly for emergency food aid is highly affected by extremes weather events which cause substantial damages to national road and transportation network.	Highly impacted because: Extreme weather events cause large damages to road transport and market networks, which Minimizes government's support to food supply due to allocation of large public finance for maintenances of road and transport system.	Highly impacted because: Losses and damages to household assets may result low household income which reduces the communities purchasing power, Damages to transport and market Infrastructure reduces on time public access to meet urgent food needs and medical needs.	Highly impacted because food safety, diet quality and hygiene are highly affected by extreme weather events for the following reasons: Facilities of food storage, processing, harvesting and transportation could be damaged by flooding. Extreme events of flooding & draught increases the risk of water-borne, food-borne & other infectious diseases cause,
Water availability	Highly impacted: because The changes in temperature and precipitation result in a decrease or increases in catchment hydrology due to variations in river flow; and these directly lead to the fluctuations in hydropower production & irrigation schemes, which are determinant factors of food and nutrition security.	Highly impacted because climate change induced water scarcity enhances agricultural droughts and results substantial decline in overall agricultural production, which is a challenge for maintaining food availability at national and household level.	Highly impacted because, irregular rainfall, increases agricultural product demands which lead to violent conflict over the allocation and use of the waters and land resources.	High impacted because for countries whose economy is dependent on rain-fed agriculture, GDP is positively associated with droughts; and these indicates low food purchasing capacity of the community as well as the government to sustain food availability during the years of extreme climate events.	Highly impacted because extreme events of drought and flood enhance scarcity of water and energy availability, respectively; and these put heavy workloads on women, making it harder for them to meet the nutritional needs of their families.
Increases in atmospheric CO2	Highly impacted because: Models predicted atmospheric CO2 concentration would reach to >500 ppm during the coming 50 years, and this is anticipated to have effect on the production and nutritional levels of major food crops; and this would result in new challenges in securing food and nutrition.	Highly impacted because: increases in atmospheric CO2 and subsequent changes in temperature and precipitation would result in 3-20% reduction of yields of major food crops namely wheat, barely, sorghum and maize. These ultimately reduce overall availability of food at household and country level.	Highly impacted because: CO2 impacted decreases in overall food production and yield adversely affect supply of adequate food and feed meeting everyone's food demand.	Highly impacted because: decrease in the production of major food crops and subsequent decreases in selected nutritional contents would elevate preferential food prices at local and national market, which cannot be affordable by ordinary consumers to meet their dietary needs.	Highly impacted because: Elevated atmospheric CO2 emission is known to have strong effect on nutritional quality of major food crops such as reduced content of protein, iron, etc by about 11%. This ultimately may increase food and nutrition insecurity in the future as climate continues to change as CO2 emission increases.

Increases in rainfall causes flooding	Increase in rainfall extremes cause occurrence of cycling floods)	Highly impacted because: Increases soil erosion hence reduce crop and fodder production, Increase loss and damage to human lives and property	Highly impacted because food supply is reduced by loss of assets and production, as well as transportation is possible inaccessible	Highly impacted because: Affected people have lost the assets and have no capacity to meet daily food demand.	Highly impacted because: Affected people do have no access to nutritious food.
Increases Pest, Disease and Invasive Species	Increased rainfall followed by prolonged warm days increases pests and disease infestation as the case of desert locust. At the same time it may increase the colonization of natural vegetation with invasive exotic species.	Highly impacted because the food production is reduced very much	Shortage of food production lead to market fluctuation, and many of the community may not afford to meet the required food.	Food is less available to the community where there is shortage.	Food diversity in terms of nutrition is reduced.

Source: Dorothy et al., 2020; Zewdu, 2018

Climate change has strong links with poverty and hunger. Not only does climate change increase poverty and hunger through its adverse effect on food security and economic development, poverty and hunger also decrease people's resilience and adaptive capacity to climate change effects. Climate change will also have a significant impact on labour productivity and health. Under a high emissions scenario, due to the increase in temperatures (+4°C) the UNFCCC/WHO projects with a loss of 2% annual daily work hours for workers carrying out heavy labour (e.g., agriculture and construction) and an increase in heat related deaths among elderly people (65+) to over 65 deaths per 100,000 by 2080, compared to the estimated baseline of 3 deaths per 100,000 in 1990 (MFAN, 2018). Climate change induces forced migration which in turn causes increased population in already highly densely populated areas. High and increasing population density increases climate change vulnerability because it decreases the amount of resources (including water and food) available per person and may lead to resource conflicts. In Ethiopia, population density is highest in parts of the SNNPR and lowest in pastoral livelihoods areas. The following table shows the overall impacts of climate change on agriculture:

Table 2: Climate change related impacts on agriculture

	Climate stresses	Key impacts
1	High mean temperature	Shifting agro-ecological zones
2	Days with a max temperature above 35˚C	Heat stress for some crops
3	Days with a max temperature above 40˚C	Leads to heat stress on people and livestock
4	Lower mean rainfall	Shifts in agro-ecological zones; plus drought impacts
5	Higher mean rainfall	Landslides, damage to crops and livestock
6	Large scale floods	Damage to crops, livestock, infrastructure and people
7	Flash floods	Local damages to crops, livestock, infrastructure & people
8	High 1-hour rainfall intensity	Soil erosion and landslides, some local damages to crops
9	Heavy hail events	Crop damage at certain times in the growing season
10	Rainfall distribution (variability) within season	Significant impact on some crops
11	10-day dry spells	Significant impact on some crops

12	Seasonal droughts	Significant impact on most crops
13	Consecutive seasonal droughts	Significant impact on livelihoods and economic growth
14	Later onset of rainfall season	Shortens growing period - impacts on crops, fodder
15	Earlier end date of the rainfall season	Shortens growing period - impacts on crops, fodder
16	Decreased predictability of the rainfall season	Less reliable forecasts affect some enterprises
17	Increased uncertainty in rainfall distributions	Increases risk, important for some enterprises
18	Increases in cloudiness and humidity	Reduces radiation, increases thermal stress for people

Source: (MFAN, 2018)

3. Conventions, national polices and strategies relevant to climate change and climate finance

Following the COP 15, there has been long-standing commitment to keep the global temperature increment at well below 2°C as compared to the pre-industrial level. Consistent with meeting the 2°C goal, global infrastructure investment needs are estimated to be USD 89 trillion between 2015 and 2030 (NCE, 2014); and much of this is to finance new infrastructure in emerging markets and developing countries. In response to the COP 15 agenda meeting, the 2°C target, financial institutions have channeled finances for climate change mitigation and adaptation in developing countries through the UNFCCC mechanisms include the various funds under the Global Environment Facility as well as the Adaptation Fund, that are sourced from bilateral, multilateral and private finance intuitions.

According to the Adaptation Gap Report 2020, adaptation cost is expected to be $140 - $300 billion annually in 2030. Further, the LDC 2050 Vision Report 2019 estimates that LDCs need around $40 billion annually between 2020 and 2030 to implement adaptation priorities as stated in their Nationally Determined Contributions (NDCs). Developed country Parties have made commitment “to a goal of mobilizing jointly $100 billion dollars a year by 2020” in climate finance at the 15th United Nations Convention on Climate Change (UNFCCC) Conference of the Parties (COP 15) in Copenhagen in 2009 (MoFED, 2017).

a. Global and Regional Perspective

The 2015 Paris Agreement/PA, article 9 declared that developed country Parties shall provide financial resources to assist developing country Parties with respect to both mitigation and adaptation in continuation of their existing obligations under the Convention. Likewise, it emphasized that the provision of scaled-up financial resources should aim to achieve a balance between adaptation and mitigation, taking into account country-driven strategies, and the priorities and needs of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change and have significant capacity constraints, such as the least developed countries.

Though the enabling international and regional policy and institutional frameworks and financial instruments are in place, the LDC have expressed their concerns on accessing the committed and approved climate finance. The IIED report indicates that only 18% of global climate finance reaches LDCs and from 2003 – 2016, less than 10% of all global climate funds was earmarked for local climate action. The same report discloses that the cost of adaptation is rising faster while the rise of committed funding, disbursement and access to fund remain slow and unpredictable. The current slow disbursement with top-down conditionalities is limiting the LDC’s opportunities to gain direct access to global finance and for efficient utilization of the climate finance.

3.2 Ethiopia's Policy Response to Climate Change

Recognizing impacts of climate change and its vulnerabilities, Ethiopia is a leader on climate change action in Africa and amongst least developed nations to develop policies, strategies, and institutional frameworks for climate action to advance an effective climate change response in the country. Well ahead of many nations, Ethiopia has established climate change legislations, policies, plans, and institutions at national and sub-national levels. Though Ethiopia's medium term development plans and strategies integrate climate change and sustainable development principles in early 2000s, the CRGE Strategy is the first national policy document developed in 2011 on strategically focused climate change responses. Prior to the CRGE, the National Adaptation Plan of Action (2007) and Ethiopian Program of Adaptation on Climate Change and Nationally Appropriate Mitigation Actions (2010) were in place as part of Ethiopia's commitment to curb the devastating impacts of climate change in the country.

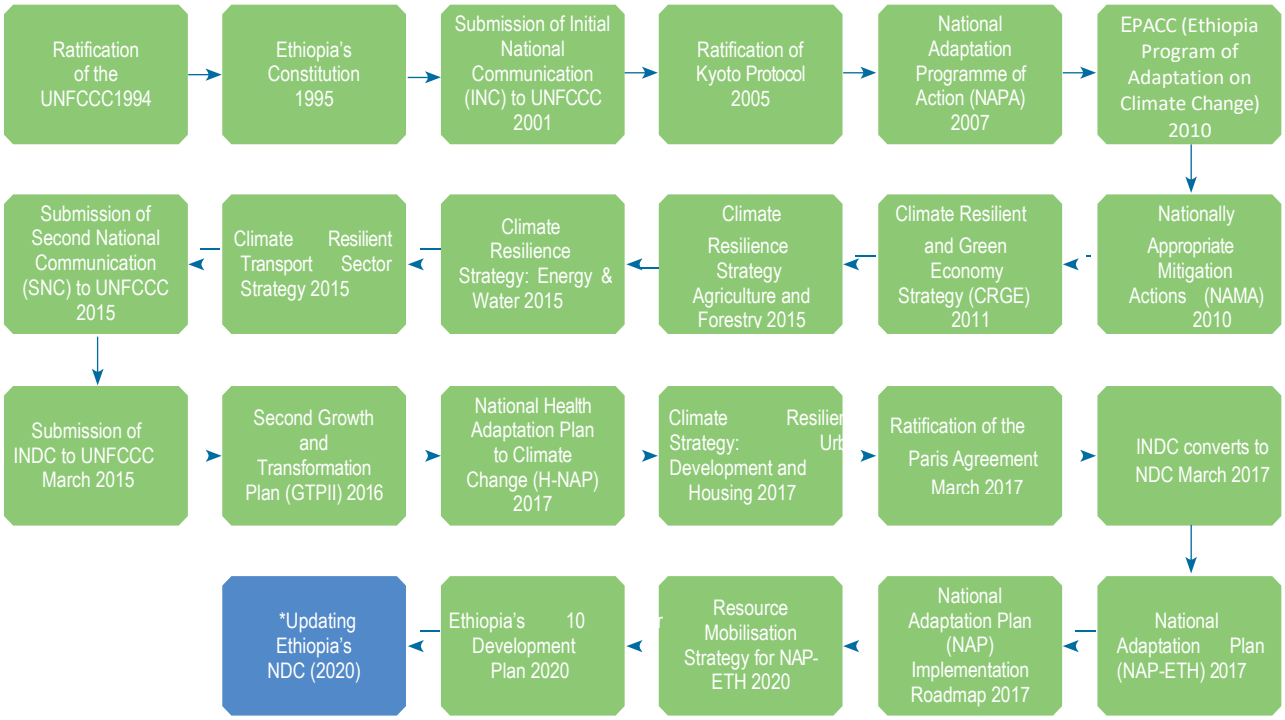
The CRGE strategy has focused on the climate change mitigation aspects, and did not specifically address climate change adaptation or resilience. The gap was recognized and rectified through the development of sectoral climate resilience strategies – for the agriculture and forestry sectors, the water and energy sectors, the transport sector, Urban as well as health sectors. Even without a specific mention of adaptation or building resilience, Ethiopia has been implementing massive development interventions since early 2000s, most of which contribute to greater adaptive capacity and increased resilience. More strategically from 2011, a large proportion of adaptation activities took place in the agriculture sector, focused on soil, water conservation and crops, as well as in the livestock management and water resource development for hydropower and irrigation sectors. These included large flagship resilience projects such as the Productive Safety Net Programme (PSNP), the Agricultural Growth Programme (AGP), the Sustainable Land Management Programme (SLMP), the Participatory Small-scale Irrigation Development, the ONE-Wash programme and the Green Legacy Initiative (GLI).Likewise, large-scale REDD+ interventions are implemented across the country that contributed to adaptation, even as they are predominantly designed to have mitigation impacts through reducing emission from deforestation and enhancing carbon sequestration (EFCCC, 2019).

Ethiopia submitted its Nationally Determined Contributions/NDC to the UNFCCC on 10 June 2015 which later converted to Ethiopia's 1st NDC after Ethiopia ratified the Paris Agreement in March 2017. Ethiopia's 1st NDCs has specific aims to reduce emission to 145 Mt CO2eq or lower by 64% from a business-as-usual trajectory by 2030 and also to reduce societal vulnerability to climate shocks by undertaking series of adaptation initiatives. Both strategies, CRGE and NDCs, are therefore well aligned to each other and are considered as an implementing mechanism of addressing climate change challenges.

To advance the integration of climate change adaptation and mitigation into the national planning, policy and budgeting process, Ethiopia has continued developing and refining a comprehensive CRGE/NDCs strategy. The National CRGE has lay out the detailed guidelines and framework outlining the sectors strategies and priority actions to climate change adaptation and mitigations and their contributions to the nationally determined targets. The CRGE strategy was mainstreamed into the national medium-term plan, Second Growth and Transformation Plan (GTP II) for the 2015-2020 period. Ethiopia is currently implementing the ten-year national Developed Plan (10YDP) (2021-2030) which mainstreamed climate change across all sectors and towards achieving the set target to the NDCs. The country has recently communicated one of the most ambitions updated NDC (2021) in the world with 68.8% emissions reduction target by 2030 from the Business-As-Usual.

Broadly, the climate change policies, plans, and legislations include: the re-establishment of Environment, Forest and Climate Change Commission, development of climate-compatible medium and long-term national plans, Climate Resilient Green Economy Strategy, National Adaptation Plan, the Nationally Determined Contribution, CRGE climate finance facility, REDD+, and National Forest Sector Development Program. At the sub national level, local governments are also developing their climate change response plans which have prioritized climate change agendas and adaptation and mitigation measures. These all efforts demonstrate not only Ethiopia's desire to grow economically and become a middle-income country, but also its ambition to build a low carbon and climate resilient economy. The following figure presents Ethiopia's legislative, institutional, policy, programmatic and strategic responses and preparedness to climate change challenges and actions.

Figure 2: Ethiopia's Climate Change Policy Roadmap



Source: Ethiopia's Updated NDCs (2021)

Overall, Ethiopia has put in place multifaceted institutional architectures. A CRGE Facility was established, comprising of the Ministry of Finance, responsible for financial aspects of CRGE implementation as well as M&E, and the EFCCC responsible for technical elements and day-to-day administration, as well as developing guidance and rules for CRGE implementation and the national plan, at large. The institutional set up reflects a cross-sectoral, multi-disciplinary approach, and inter-ministerial and steering committees allowing sub-national level stakeholders engagement. Rules, procedures, operating manuals, guidelines, tools, and protocols to implement and facilitate the CRGE strategy and facility are developed to facilitate resource mobilization and implementation.

Ethiopia has experienced countless localized drought events, and developed a long history of coping with extreme weather events and climate change. The country has adopted the first National Adaptation Program of Action (NAPA) in 2008 and prioritized the following actions in response to current and projected climate change:

- Promoting drought/crop insurance programs;
- Strengthening/enhancing drought and flood early warning systems;
- Developing small-scale irrigation and water harvesting schemes in arid, semi-arid, and dry subhumid areas;
- Improving/enhancing rangeland resource management practices in pastoral areas;
- Establishing community-based sustainable utilization and management of wetlands in selected regions of the country;
- Establishing a capacity building program for climate change adaptation;
- Realizing food security through a multi-purpose large-scale water development project in the Genale-Sawa Basin;
- Establishing a community-based Carbon Sequestration Project in the Rift Valley System;

The agriculture and forest focused policies/programs are crafted with highly relevant objectives and interventions to integrate climate change adaptation and mitigation targets; and these include: Agriculture Growth Program (AGP2), Productive Safety Net Program (PSNP4), Ethiopian Strategic Investment Framework for Sustainable Land Management (ESIF-SLM), Ethiopian National Adaptation Plan (ET-NAP), Livestock Master Plan (LMP), National Forest Sector Development Program (NFSDP), Updated NDCs, and 10 YDP. These key Strategies, policies and initiatives do guide the national development priority areas and are well aligned with the goals of those international conventions such as SDGs; and open more opportunities for accessing international climate finance.

Overall, Ethiopia is on track in terms of developing policies and strategies that facilitate to address the climate change challenges. They are well articulated both in the recently developed the Ten-Year National Development Plan and the updated National Determined Contributions/NDCs documents. However, it is worth noting to stress the capacity gap in accessing finance, implementation, knowledge/database management and tracking progresses remained to be addressed.

4. Multilateral, Bilateral and Private Sector financing institutions supporting the climate change projects in LDCs and globally

Developing countries will need an estimated $4 trillion per year in investments up to 2030 to build infrastructure to meet their development needs. These investments will enable developing countries to build sustainable and resilient infrastructure, create new jobs, and where relevant leapfrog to low carbon solutions. Current finance flows fall far short of that. To successfully achieve climate and development objectives, the world must mobilize trillions of dollars in the coming decade. Existing public, private, and concessional climate finance needs to be deployed in more transformative and catalytic ways, leveraging additional capital to bridge the gap between available resources and needs (World Bank, 2021).

Despite an increase in climate finance available for both climate change mitigation and adaptation, the financing gap is not closing. Annual adaptation costs in developing countries alone are currently estimated to be in the range of US$70 billion, with the expectation of reaching US$140–300 billion in 2030 and US$280–500 billion in 2050. Providers of development finance are not integrating adaptation well enough across their activities. While multilateral support for adaptation as a share of overall multilateral development finance has risen significantly, bilateral support as a share of overall bilateral development finance has only increased slowly between 2013 and 2017 (UNEP, 2021).

To facilitate the provision of climate finance, the United Nations Framework Convention on Climate Change established a financial mechanism to provide financial resources to developing country Parties. The financial mechanism also serves the Kyoto Protocol and the Paris Agreement. Through the Cancun Agreements in 2010 developed country Parties committed, in the context of meaningful mitigation actions and transparency on implementation, to a goal of mobilizing jointly USD 100 billion per year by 2020 to address the needs of developing countries. When adopting the Paris Agreement Parties confirmed this goal, called for a concrete road map to achieve the goal by 2020, and agreed that prior to 2025 the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA) shall set a new collective quantified goal from a floor of USD 100 billion per year. The Convention states that the developed country Parties may also provide and developing country Parties avail themselves of, financial resources related to the implementation of the Convention through bilateral, regional and other multilateral channels[i].

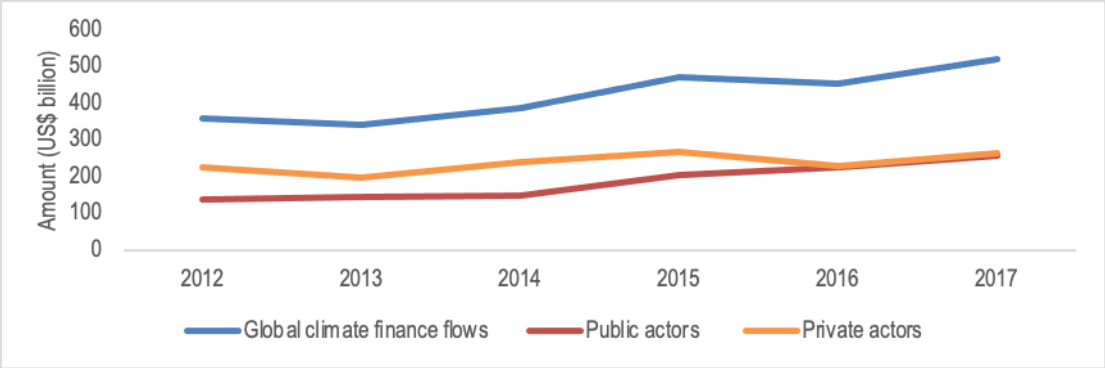
The Convention states that the operation of the financial mechanism can be entrusted to one or more existing international entities. The Global Environment Facility (GEF) has served as an operating entity of the financial mechanism since the Convention's entry into force in 1994. At COP 16, in 2010, Parties established the Green Climate Fund (GCF) and in 2011 also designated it as an operating entity of the financial mechanism. The financial mechanism is accountable to the COP, which decides on its policies, programme priorities and eligibility criteria for funding. In addition to providing guidance to the GEF and the GCF, Parties have established two special funds—the Special Climate Change Fund (SCCF) and the Least Developed Countries Fund (LDCF), both managed by the GEF—and the Adaptation Fund (AF) established under the Kyoto Protocol in 2001.

At the Paris Climate Change Conference in 2015, the Parties agreed that the operating entities of the financial mechanism – GCF and GEF – as well as the SCCF and the LDCF shall serve the Paris Agreement. Regarding the Adaptation Fund serving the Paris Agreement negotiations, although the mandate of the Ad hoc Working Group on the Paris Agreement (APA) is expired at the COP24, negotiations are underway. Those international climate financing instruments/institutions i.e. GEF, GCF, SCCF, AF, LDCF, World Bank and other major multilateral, bilateral and private sector funding sources and their commitments, focuses and priorities and hyperlinks to their specific websites are annexed for further reference, learning and easy access..

a. Resource Mobilization, allocation and investment of Climate Financing

According to the Climate Policy Initiative (CPI), global climate finance flows increased from US$ 360 billion in 2012 to US$ 455 billion in 2017, grew by 7.6 per cent per year (Figure 3). The annual average over the 2012-2017 period is US$ 423 billion. A large share of global climate flows has been driven by rising private investment; climate investment by private actors surged to US$263 billion in 2017 compared to US$ 224 billion in 2012. Public climate investment also increased between 2012 and 2017, increased by 13.6 per cent per year. The annual average climate investment by the public sector was US$186 billion over the 2012-2017 period compared to US$237 billion by private actors. Note that private investment in climate initiatives continues to account for the major share of climate-related investments. Public sector (e.g. governments and national development banks) have also increased their climate-related investments (Tadele F., 2019).

Figure 3: Trends climate finance flows (US$ billion)

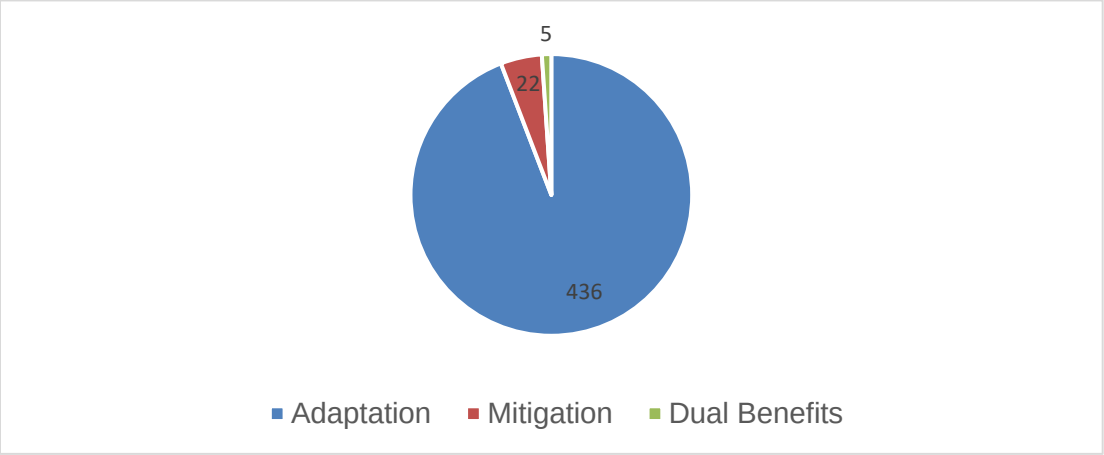


Source: Climate Policy Initiative/CPI (2018)

Disaggregating private climate-specific finance flows indicates that project developers, commercial financial institutions, households and corporate actors remain the main sources of private climate finance flows between 2015 and 2016. The public (government) and private sectors have become the dominant recipients of climate finance flows during the 2015-2016.

In terms of the uses of climate finance, it appears that a large share of climate finance is invested in mitigation activities. For instance, of the US$463 billion average climate finance between 2015 and 2016, about US$436 was invested in mitigation, with adaptation and dual benefits accounted for the remaining, US$22 and US$5, respectively. This is indicative of the fact that both private and public institutions invested in climate mitigation activities with limited focus on adaption (Tadele F., 2019).

Figure 4: Uses of climate finance flows (US$ billion)



Source: Climate Policy Initiative (2018)

The sectoral distribution of global climate finance shows significant variation across sectors (Table 4). The adaptation allocation of climate finance indicates that agriculture and allied activities received a large share, while renewable energy and sustainable transport sectors received the lion's share within the mitigation component. Energy efficiency also received a good share which perhaps pinpoint the growing interests of bilateral and multilateral financial institutions in the renewable energy and mass transport activities. Based on the available data, the three top sectors: agriculture, water and livestock together accounted for about 80 per cent of total climate finance. Both adaptation and mitigation would receive increasing investment (Tadele F., 2019)

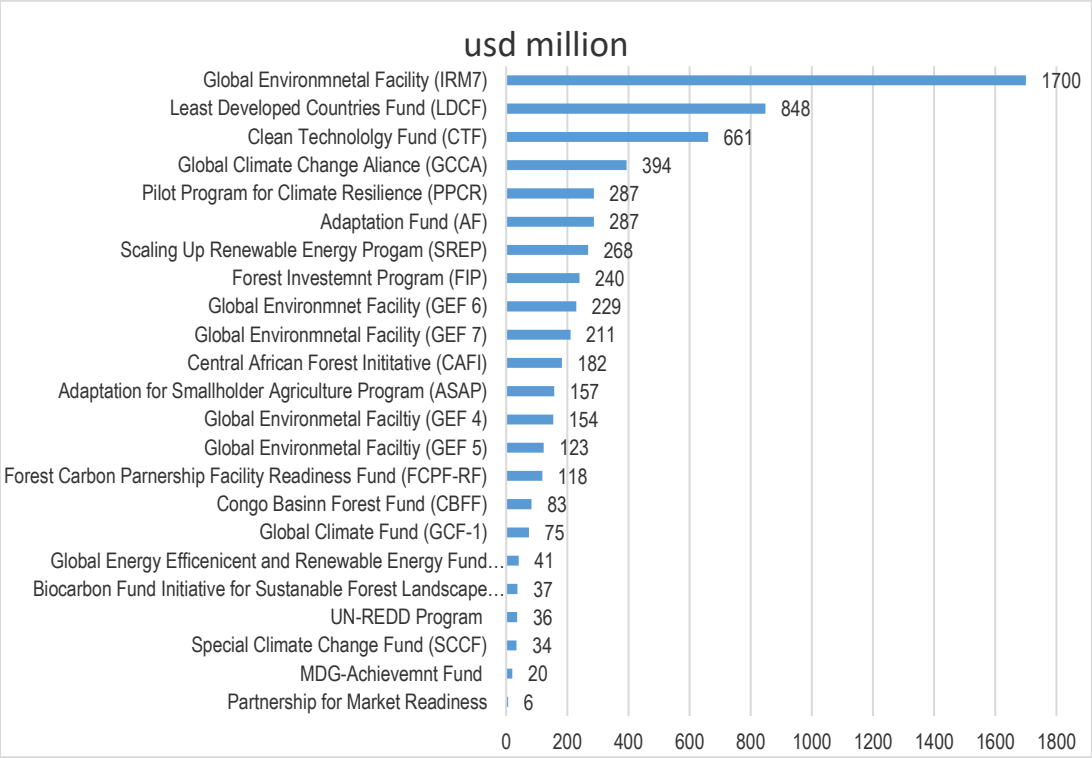
Table 3: Breakdown of global climate finance by sectors (US$ billion)

Sector	2015	2016	Average
Adaptation	22	22	22
Disaster risk management	3	3	3
Agriculture, forestry, land-use and natural resource management	4	5	5
Coastal protection	0.2	0.1	0
Industry, extractive industries, manufacturing and trade	0.1	0.1	0
Infrastructure, energy and other built environment	1	1	1
Other/ cross-sectoral	2	3	3
Policy and national budget support and capacity building	0.2	0.4	0
Water and wastewater management	11	11	11
Mitigation	445	427	436
Agriculture, forestry, land-use and natural resource management	5	4	5
Energy efficiency	26	33	30
Low carbon technologies	2	2	2
Non-energy GHG reductions	0.1	0.1	0
Other/ cross-sectoral	6	10	8
Policy and national budget support and capacity building	0.2	0.3	0
Renewable energy generation	321	269	295
Sustainable transport	78	106	92
Transmission and distribution systems	6	3	5
Waste and wastewater management	1	0.7	1
Dual Benefits	5	6	6
Total	472	455	463

Source: Climate Policy Initiative (2018), and (Tadele F., 2019)

Since the Rio Earth Summit in 1992, a large number of multilateral financing channels are established with support from multilateral, bilateral and private sector investment to mobilize climate financing to assist particularly LDCs to reduce vulnerability and increase resilience to adverse impacts of climate change. About 23 financing vehicles have been established to be functional and mobilized large amount of finance and made technical and knowledge support to LDCs to address climate change challenges.

Figure 5: Financing vehicles and amount of climate financing mobilized in response to climate challenges to Sub-Saharan Africa



Source: https://climatefundsupdate.org/data-dashboard/regions/.

Since the Rio Earth Summit in 1992, the financing vehicles mobilize an estimated amount of USD 6191 million for sub-African countries as of December 2020. As shown above, the largest climate financing (USD 1700 million) was mobilized by GEF-IRMS and followed by LDCF and CTF that had so far mobilized estimated amount of USD 848 million and 661 million, respectively.

4.2 Ethiopia's Access to Climate Finance from major international support mechanisms

With available data, the major international financing vehicles that the convention came up with for LDCs and Ethiopia's access to and allocations of the funds to address climate change challenges are highlighted below.

4.2.1 Global Environment Facility (GEF)

The GEF administers several funds, helping developing countries and countries with economies in transition to meet the objectives of the international environmental conventions and agreements. Since the last 30 years, GEF is the largest multilateral trust fund focused on enabling developing countries to support the implementation of major international environmental conventions including on biodiversity, climate change, chemicals, and desertification. For supporting these sectors GEF has provided more than USD 21.5 billion in grants and mobilized an additional USD 117 billion in co-financing for more than 5,000 projects and programs in 135 countries across the globe. GEF has Small Grants Programme, through which GEF has provided support to more than 25,000 civil society and community initiatives in 135 countries.

GEF finances three Impact Programs; and these are Food Systems, Land Use, and Restoration (FOLUR) Impact Programs which provide the opportunity for an integrated approach to implementing sustainable land management to increase the prospects for food security for smallholders and communities that are dependent on farming for their livelihoods that form a major component of the GEF delivery towards combating land degradation and deforestation. The Sustainable Forest Management (SFM) Impact Program seeks to avoid further degradation, desertification, and deforestation of land and ecosystems in drylands through the sustainable management of production landscapes. The Sustainable Cities Impact Program will create opportunity for countries to integrate voluntary Land Degradation Neutrality (LDN) targets into urban planning.

GEF funded countries are categorized/grouped constituencies; and Ethiopia is a member of a constituency comprised of 14 countries: Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Mauritius, Rwanda, Seychelles, Somalia, South Sudan, Sudan, Tanzania and Uganda. Ethiopia received thus far the GEF grant of total financing USD 799,374,968 and of Co-Financing USD 6,912,626,205 through three Trust Funds: GEF, LDCF and SCCF for implementing a total of 82 national and regional projects in three focus areas of climate change, biodiversity, and land degradation.

Table 4: GEF funded projects in Ethiopia

Trust Fund	Project Type	Number of Projects	Total Financing	Total Co-Financing	Duration and implementation period
GEF	National	24	77,212,344	485,563,754	The duration of the projects varies from 1 – 6 years and covers from 1993 – 2021. Refer annex for details.
	Regional/Global	49	675,585,283	6,181,057,504	
LDCF	National	6	31,453,378	151,157,430	
	Regional/Global	0	0	0	
SCCF	National	3	15,123,963	94,847,517	
	Regional/Global	0	0	0	
Total		82	799,374,968	6,912,626,205	

Source: https://www.thegef.org/Country; © 2021 Global Environment Facility

As seen below, the largest GEF financing was invested on supporting biodiversity followed by climate change intervention and land degradation projects during GEF 4-6. The grant amount increased from GEF 4 to GEF 6 substantially.

Table 5: GEF allocated and utilized financings Ethiopia received during funding cycles (STAR-GEF 4-6) in climate change, biodiversity and land degradation.

STAR-GEF	Focal area	Indicative allocation	Allocation utilized	Allocations remaining to be programmed
STAR GEF-6	Climate Change	7,405,184	7,410,000	-4816
	Biodiversity	10,562,236	10,542,998	19238
	Land Degradation	5,266,260	5,271,001	-4741
STAR GEF-5	Biodiversity	8,130,000	7,730,000	400000
	Climate Change	6,590,000	6,590,000	0
	Land Degradation	4,290,000	4,290,000	0
STAR GEF-4	Climate Change	5,150,000	1,500,000	3650000
	Biodiversity	8,100,000	8.114,760	-14760
Total		55,493,680	51,448,759	4044921

Source: https://www.thegef.org/Country; © 2021 Global Environment Facility

With regards to GEF funding in terms of implementing international agencies UNDP and UNEP are major implementing agencies for Ethiopia's GEF funded projects during 2007-2017 (Table 7). UNDP implemented the GEF grant with a total transaction $5,414,960 in financing climate change and biodiversity projects. Whereas UNEP implemented the GEF grant with a total transaction of $ 8,114,760 for managing implementation of climate change and biodiversity interventions.

Table 6: Ethiopia's GEF financing implemented by UNDP and UNEP during 2007- 2017

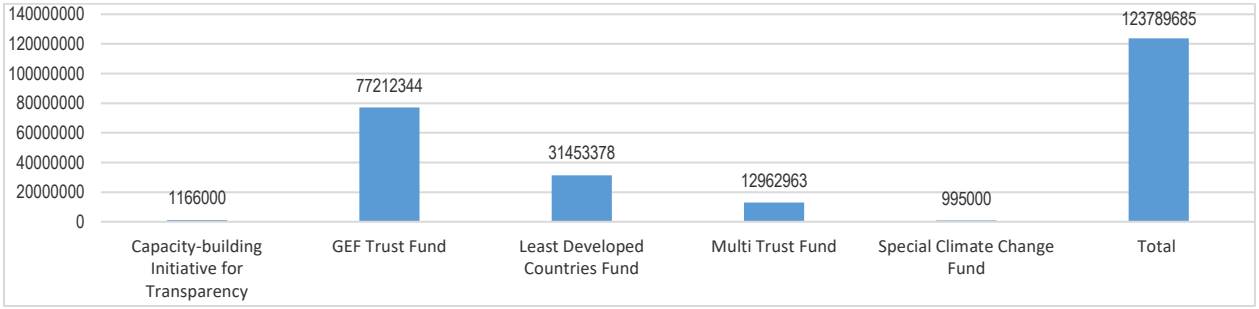
Focal Area	GEF Agency	Approval Date	GEF Project Grant	GEF Agency Fee	Total Transaction
Biodiversity	UNDP	6/14/2007	$144,546	$5,454	$150,000
Biodiversity	UNDP	11/13/2008	$3,863,600	$401,360	$4,264,960
Biodiversity	UNDP	11/17/2008	$150,000	$0	$150,000
Biodiversity	UNDP	4/21/2009	$432,692	$17,308	$450,000
Climate Change	UNDP	6/14/2007	$96,364	$3,636	$100,000
Climate Change	UNDP	4/21/2009	$288,462	$11,538	$300,000
Total			$4,975,664	$439,296	$5,414,960
Biodiversity	UNEP	1/12/2010	$616,000	$61,600	$677,600
Biodiversity	UNEP	1/12/2010	$20,000	$2,000	$22,000
Biodiversity	UNEP	6/8/2010	$2,047,000	$204,700	$2,251,700
Biodiversity	UNEP	4/28/2010	$135,000	$13,500	$148,500
Climate Change	UNEP	3/17/2010	$950,000	$95,000	$1,045,000
Climate Change	UNEP	9/11/2009	$50,000	$5,000	$55,000
Total			$3,818,000	$705,922	$8,114,760

: Source: https://www.thegef.org/Country; © 2021 Global Environment Facility

Furthermore, in terms of investment project types, GEF financing has been invested a total grant volume of USD 123,789,685 in 33 typologies. The major sources of fund for GEF are: Capacity-building Initiative for Transparency, GEF Trust Fund, Least Developed Countries Fund, Multi Trust Fund and Special Climate Change Fund. The five major GEF implementing agencies are: GEF Secretariat, International Fund for Agricultural Development, The World Bank, United Nations Development Programme and United Nations Industrial Development Organization.

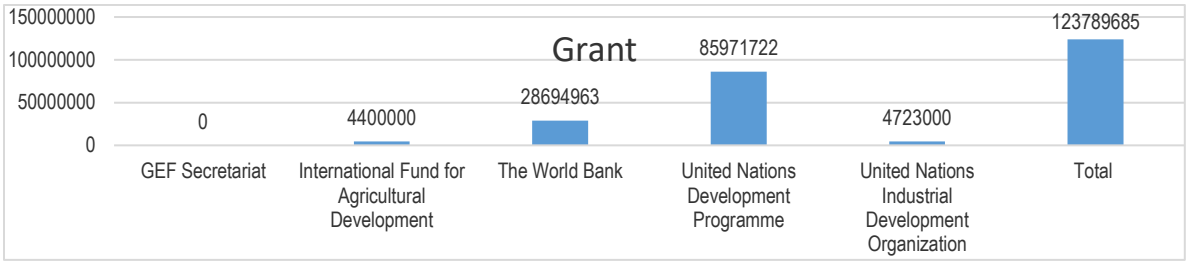
From the total volume of USD 123,789,685 investment, four typologies were had the highest allocated grant: sustainable land management project 2 with estimated value of USD 12,962,963, food aid integrated landscape management to Enhance Food Security and Ecosystem Resilience with estimated value of USD 10, 239,450 and followed by SIP/Country Program for Sustainable Land Management (ECPSLM) with estimated value of USD 9,000,000 and Sustainable Development of the Protected Area System with estimated allocation of USD 9,000,000. In terms of funding sources, the largest financing was obtained from GEF trust fund equivalent to USD 77,212,344 and followed by LCDF amounting USD 31,453,378. Refer the annex 4 for details on the share of GEF investments to specific programme.

Figure 6: GEF grants from different sources of fund (USD)



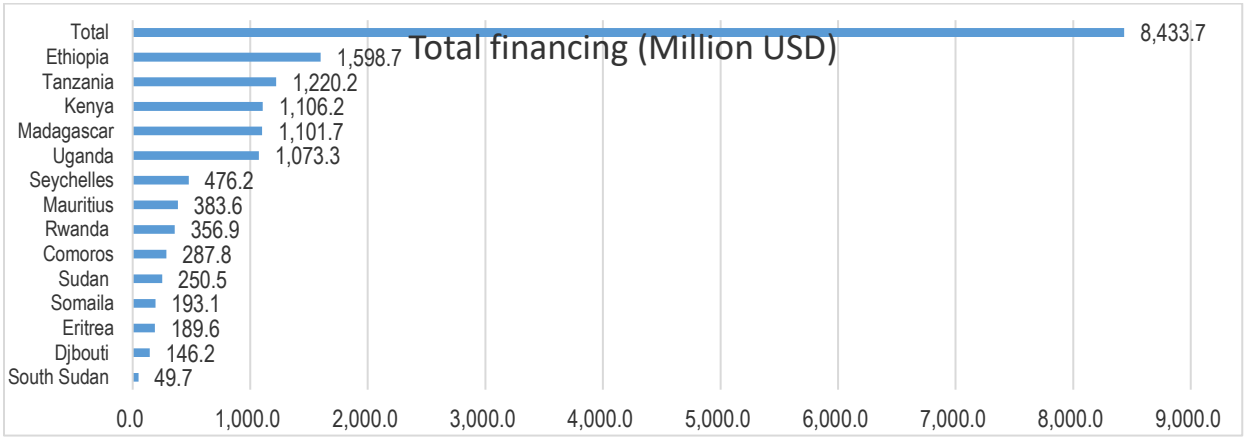
The UNDP is the highest GEF project grant implementing agency that has accessed the GEF grant volume of financing (USD 85,971,722) almost three times higher than the world bank.

Figure 7: Volume of GEF Grant implemented by various implementing agencies.



Compared to the GEF grant receiver constituencies, GEF invested a total volume of USD 8433.7 Million for various project implementation in 14 counters of the constituents (Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Mauritius, Rwanda, Seychelles, Somalia, South Sudan, Sudan, Tanzania, Uganda); and from these the share of Ethiopia was estimated to 19% of the total volume granted in the constituents.

Figure 8: GEF grant volume received by member countries of GEF grant constituencies (Million USD)



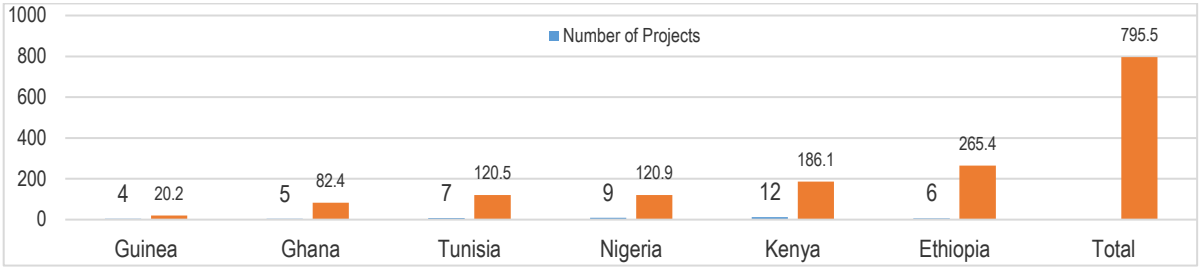
Additionally, Ethiopia has used GEF Small Grant Program. Ethiopia started participating in GEF-SGP since end of 2005 with four Operational Phases (OP) which are OP3, OP4, OP5 and OP 6 (2015-2018) and has funded and provided technical support for a total number of 193 grantees with a total grant of US$5,128,250 allocated/committed to OP3, OP4 & OP5 (GEF-SGP.20161).

[1]GEF-SGP 2016. Global Environmental Facility Small Grant Program (SGP) implemented by UNDP, GEF SGP country program strategy for OP6 (2015-2018), Ethiopia, Addis Ababa June 2016.

4.2.2 Green Climate Fund (GCF)

GCF is established in 2010 and mandated to invest 50% of its resources to mitigation and 50% to adaptation in grant equivalent. At least half of its adaptation resources must be invested in the most climate vulnerable countries (SIDS, LDCs, and African States). Figure 10 compares the volume of the GCF financing in six African countries with a total grant of USD 795.5 million.

Figure 9: GCF financing in Seven African countries.



Ethiopia received the largest GCF funding (USD 265.4 million) for implementing six projects; and the country with the least GCF financing was Guinea who received a volume of USD 20.2 million for financing four of its projects. Kenya had the largest number of projects which GCF provided Grant support of USD 186.1 million.

Ethiopia's projects showed substantial impacts on enhancing adaptation and mitigation outcomes (Table 7).The GCF projects are accessed through GCF finance facilities, which mobilized a total grant volume of USD 2630.2 million, and reduced emission reduction of 197 m tones of CO2 eq. Projects were largely focused on mitigation interventions in improving access to renewable energy sector and sustainable forest management.

Table 7: GCF-Financing facilities supporting climate change mitigation and adaptation interventions in Ethiopia

GCF-finance facility	Funding (USD million)	GHG-Avoided (metric tons)/ beneficiaries (million)	Focus area	Approved Date	Project life-span/ Completion & # of projects
Leveraging Energy Access Finance (LEAF) Framework	959.9	28.9	Renewable energy solutions, COVID-19	01 July 2021	25 Years (1 Project doc)
Resilient Landscapes and Livelihoods Project	297.2	43.8	Livelihood productivity and resilience through sustainable land management, low-emission resilient agriculture practices, and enhanced land tenure	21 August 2020	07 Oct 2025 (1 Project doc)
Environmental Safeguard Arbaro Fund – Sustainable Forestry Fund	200	20	Provide effective climate change mitigation outcome through investing in sustainable plantation forestry projects in emerging forestry markets of Latin America and Sub Saharan Africa, while also bringing adaptation co-benefits.	12 March 2020	30 Oct 2034 (3 Project doc)
Climate Investor One	821.5	53.7	Develop renewable energy projects in regions with power deficits to reduce energy costs and CO2 emissions	23 June 2017	23 June 2037 (2 Project doc)

Responding to the increasing risk of drought: building gender-responsive resilience of the most vulnerable communities-	50	1.3 million beneficiaries	Support improved water supply and management system for reducing country's exposure to drought and flood heavily influenced by the El Niño/La Niña phenomenon	01 August 2017	01 Sep 2022 (5 Project doc)
Universal Green Energy Access Programme (UGEAP)-	301.6	50.6	Will reduce GHG emissions by increasing access to clean electrical energy for mainly rural populations in Sub-Saharan Africa. It aims to provide financing for decentralized energy service companies for off-grid and mini-grid systems for rural households and communities and renewable energy for industrial players.	30 June 2017	30 Sep 2032 (4 Project doc)
Total	2630.2	197			

Source: Project documents: Available at https://www.greenclimate.fund/countries/ethiopia). Note that those figures are not specific to Ethiopia, but includes allocations to other countries.

4.2.3 The Adaptation Fund (AF)

The AF was established under the Kyoto Protocol of the UN Framework Convention on Climate Change, and since 2010 has committed USD 783 million to climate adaptation and resilience activities, including supporting 115 concrete adaptation projects, with over 27 million total direct and indirect beneficiaries.

Since 2010, the Adaptation Fund has committed USD 833 million to projects and programmes to date, including 121 concrete projects that spans nearly 100 countries including 19 small island developing states and 33 least developed countries. From these, AF has committed USD 783 million to climate adaptation and resilience activities. The Fund is partly financed by two percent share coming from Certified Emission Reductions (CERs) issued under the Protocol's Clean Development Mechanism projects; and this may call for integrating both climate change adaptation and mitigation interventions towards addressing the critical gaps in leveraging climate change financing. Ethiopia received a total grant amount of USD 19,474,378 from AF financing in supporting five key climate focus areas including capacity building on M & E, climate smart agriculture, climate resilient livelihood diversification, water security and awareness and ownership of adaptation planning at the local level. From the total project cost the lion share invested on the water sector and followed by capacity building and climate smart agriculture- water- land – forest integration. Refer annex 2 that shows priority areas with high potential for accessing AF funding for addressing climate change adaptation largely and partly mitigation, as it integrates the forest development interventions.

4.2.4 The Least Developed Countries Fund (LDCF)

LCDF was established at the 7th Conference of the Parties in 2001 (COP7) to meet the adaptation needs of least developed countries (LDCs), including the preparation and implementation of National Adaptation Programmes of Action (NAPAs). It is operated by the GEF grant support. Many reports indicate that the LDCF has financed the preparation and implementation of NAPAs and supported to identify priority adaptation actions for countries. LDCF with a particular focus on water, agriculture and food security, health, disaster risk management and prevention, infrastructure and fragile ecosystems, aims to:

- Reduce vulnerability and increase resilience through innovation and technology transfer for climate change adaptation,
- Mainstream climate change adaptation and resilience for systematic impact,
- Foster enabling conditions for effective and integrated climate change adaptation,

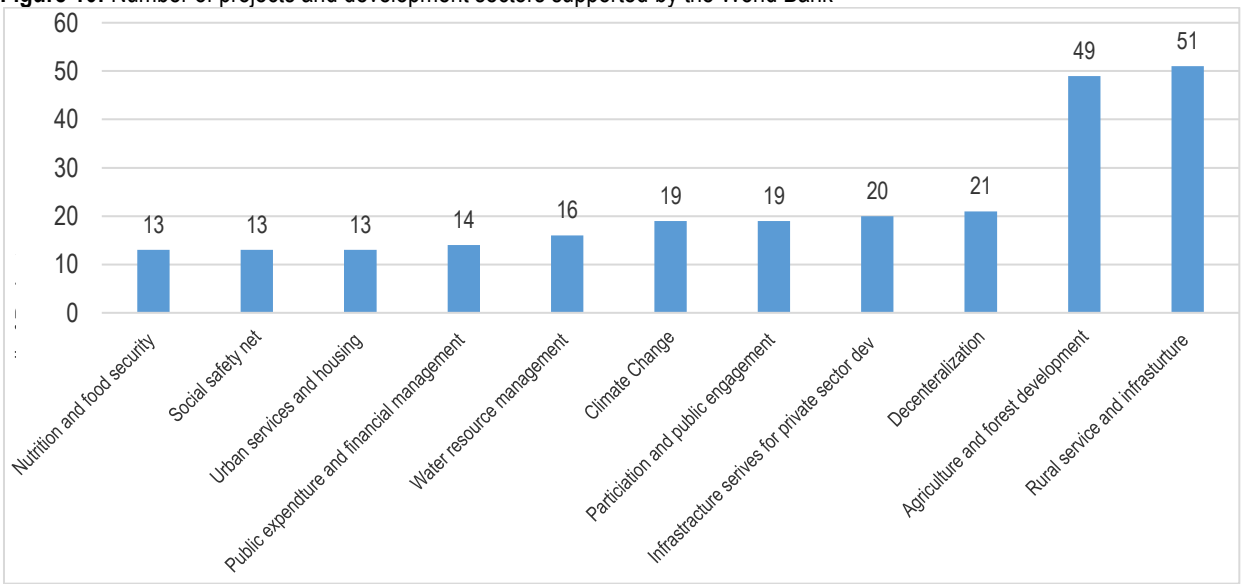
As of November 2020, the cumulative pledges to the LDCF amount to USD 1.6 billion. All LDC that are part of the UNFCCC, have been identified priority activities in the NAPA, and have established Designated National Authority to the UNFCCC are eligible for LDCF.

4.2.5 The World Bank (WB)

The large portion of the WB financing goes to supporting the development objective of the Growth and Competitiveness Programmatic Development Policy Financing Project for Ethiopia, which is structured around three strategic pillars: (i) maximizing finance for development; (ii) boosting competitiveness through a better environment for the private sector; and (iii) enhancing public transparency and accountability to promote good governance.

In 2020 Fiscal Year, the WB approved financing support of USD 4,830.3 million for 199 projects in various sectors, of which 19 projects are directly earmarked for climate changes response programmes. However, most projects do have several components that one way or the other fall under the climate adaptation and mitigation category.

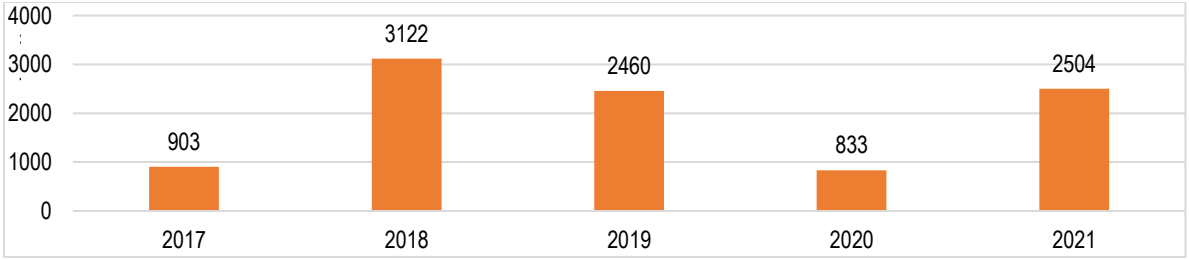
Figure 10: Number of projects and development sectors supported by the World Bank



Source: https://www.worldbank.org/en/country/ethiopia/overview

The following figure indicates the World Bank approved finance for all sectors in the last five years, starting from 2017 fiscal year.

Figure 11: Trends in Fiscal year project financing by the World Bank



Source:https://www.worldbank.org/en/country/ethiopia/overview

4.2.6 **The African Development Bank Group (AfDB)**

The 2015 Country Review on AfDB's Development Effectiveness ([2]AfDB Group 2015) reported that over the past 40 years (since 1967), the AfDB has been a leading provider of development finance in support of Ethiopia's national development agenda, with 118 projects at a total value of $4 billion. The lion's share of the support goes into infrastructure, particularly electricity supply, water and sanitation and transport, including regional connections. AfDB supports also projects in the agriculture sector, private sector development, basic services and in governance. The Board of Directors of the African Development Fund has recently approved grants to the government of Ethiopia for projects worth: (i) $31.2 million to increase access to multi-sectoral nutritional services for children under-five years, by boosting access to services for improved health, a more diverse and nutritious food, and improving knowledge, attitude and practices on feeding, care and hygiene; (ii) $48 million for three programmatic components: climate-proofed infrastructure development for effective service delivery; livelihood support, production and promotion of nutritious foods; and strengthening institutional systems and capacity building; (iii) $ 83.6 million to boost cross-border trade in electricity between Ethiopia and Djibouti and to deepen integration in the Horn of Africa sub-region; (iv) $118 Million to Support Agro Industrial Park, Youth Employment and Ethiopia-Djibouti Power Interconnection: and (v) $98 million to help finance the first phase of the Ethiopia–Djibouti Road Transport Corridor Project

The following table depicts selected projects supported by the key international and multilateral climate finance based on information gathered and compiled by the climate fund update (2017) and World Bank (2017).

Table 8: Selected projects supported by major international and multilateral climate funds (since 2012)

Name of Project	Fund	Amount of Funding Approved (USD millions)	Disbursed (USD millions)	Dates
Strengthening Climate Information and Early Warning Systems in Ethiopia to Support Climate Resilient Development	Least Developed Countries Fund (LDCF)	5	5	2012
Community Based Integrated Natural Resource Management Project	GEF/IFAD	4.4	4.4	2008-2017
CCA Growth: Implementing CRGE plans in highland areas in Ethiopia	Least Developed Countries Fund (LDCF)	6.28		2015
Geothermal Sector Strategy	Scaling-Up Renewable Energy Program for Low Income Countries (SREP)	1.5		2014
Lighting Ethiopia	SREP	2.0		2014
Geothermal Sector Development Project	SREP	24.5	1.5	2014
Strengthening Climate Information Systems and Early Warning Systems to Support Climate Resilience Development and Adaptation to Climate Change	Global Environment Facility (GEF)	16.83		2013-2017
Ethiopian Urban NAMA: Creating Opportunities for Municipalities to Produce and Operationalise Solid Waste Transformation (COMPOST)	Global Environment Facility (GEF6)	6.7	6.7	2015
Readiness program support	Green Climate Fund (GCF)	0.3	0.3	2015
Promoting Sustainable Rural Energy Technologies (RETs) for House-hold and Productive Uses	Global Environment Facility (GEF5)	4.1	4.1	2013

[2] AfDB Group 2015. African Development Bank Group Country Development Effectiveness Review 2015 - Ethiopia

Readiness preparation grant	Forest Carbon Partnership Facility (FCPF)	3.8	2.9	2012
Additional financing PSPN 116	World Bank	108		2017
Off-grid renewable energy program	World Bank	6		2016
Agricultural Growth Project I, II and additional financing	World Bank	I: 150 II: 350 Additional financing: 50		2015-unspecified
Ethiopia Rural Productive Safety Nets Project (follow-on to PSNP 4)	World Bank (funding also provided by UK, Netherlands)	600		2017-2020
Water supply, sanitation and hygiene project	World Bank	205		2014
Sustainable land management project I & II	World Bank	I: 12,9 II: 50		2013
Oromia National Regional State Forested Landscape Program	World Bank	18		2017
Responding to the In-creasing Risk of Drought: Building Gender-responsive Resilience of the Most Vulnerable Communities	Green Climate Fund (GCF)	50		2017-2022
Climate Smart Integrated Rural Development Project	Adaptation Fund	9.99	4.35	2017-2021
BioCarbon Fund Initiative	BioCarbon Fund Initiative	18	18	2014

Source: Climate Funds Update (2017) and World Bank (2017), Ministry of Foreign Affairs, the Netherlands, (2018), Climate Change Profile Ethiopia

4.2.7 Private Sector

The Bill & Melinda Gates Foundation is one of the major private sector funds that supports among other sectors the health, agriculture, food and nutrition sectors to help communities to live healthier and productive lives. The foundation supports the agriculture sector that aims to help smallholder farmers by scaling up agricultural extension services, fighting crop and livestock diseases, improving crop and poultry breeding, spurring growth in markets for agricultural products, and supporting women in agriculture.

These project interventions are principally undertaken in pursuit of addressing agriculture and food security; but not directly undertaken in pursuit of climate change objectives per se. However, in view of their impacts in reducing climate change induced loss and damages of livestock and crop production, the foundation's support interventions can be labeled as Rio marker "significant" for climate meeting adaptation objectives of the climate change. To date, the foundation granted more than USD 777 million for Ethiopia

5 Extent and Status of Access to Climate Finance in Ethiopia

Ethiopia accounts only 0.04% of the world's GHG emissions, and globally stands 93rd of the nations contributing to global GHG emissions.[3] Despite the highest and sustained economic growth trajectory, significant portion of the population live under poverty and food insecurity, with a per capita income of $790.[4] Nearly 78% of the population are living in rural area where most of them are smallholder farmers practicing low input and low output farming in a very fragmented land (CSA, 2015). Ethiopia's vulnerability to climate change and its impact on agriculture and food security is so huge as manifested by recurrent droughts and flooding in many parts of the country, particularly in the lowland areas of pastoral and agro pastoral communities.

[3]European Commission, EDGAR, Fossil CO2 and GHG emissions of all world countries (2019): https://edgar.jrc.ec.europa.eu/overview.php?v=booklet2019&sort=des8
[4]The World Bank, Ethiopia: Overview: https://www.worldbank.org/en/country/ethiopia/overview (last updated September 2019).

Ethiopia has established an innovative funding mechanism to support CRGE Strategy implementation: the CRGE Facility. The Facility is a single, national funding mechanism, intended to manage and coordinate international climate funds, donor funds and domestic funds. The Facility is co-managed by EFCCC and the Ministry of Finance. In 2016 the CRGE Facility was accredited as a National Designated Authority (NDA) for the Green Climate Fund and as a National Implementing Entity (NIE) of the Adaptation Fund. Ethiopia primarily depended on its own resources; of its climate change-relevant expenditures in 2011-12, 80% originated from government funding and 20% from donor support. At the local level, climate change funding is limited and mainly comes from federal transfers through the regions and is budgeted according to national/regional GTP targets. To close the budget gap for CRGE Strategy implementation, the Strategy foresees mobilisation of international climate finance, including development grants, 'pay for performance' greenhouse gas mitigation deals, and sale of emission credits in offset markets such as the Clean Development Mechanism (CDM) and the Emissions Trading System (ETS).

For implementation of the updated NDC in which the CRGE strategy provides the framework and actions, an estimated total expenditure of around USD 316 billion will be needed by 2030, of which 275.5 billion and 40.5 billion allocated for mitigation and adaptation interventions, respectively. A strong role is anticipated for a dynamic private sector to mobilize some of the much-needed resources.

Various climate change projects in Ethiopia are financed and implemented through bi/multilateral channels and international climate funds. Of the international climate funds that are active in Ethiopia, the Scaling-Up Renewable Energy Program for Low Income Countries (SREP) of the Climate Investment Funds (CIF) makes one of the largest contributions. About USD 30 million in grants is approved, mostly for geothermal energy development. The investment plan also foresees large-scale hydropower development and distribution of renewable energy. Current bilateral climate change projects related to water and/ or food security include projects such as Resilience through Enhanced Adaptation, Action Learning and Partnerships (2014-2017), supported by USAID for USD 5.5 million (MFAN, 2018). The RIP program (REDD+ Investment Programme) worth USD 100 million is also supported by Norwegian Government primarily for mitigation activities. Recently, GCF has awarded a USD 50 million grant for a climate resilience project.

In 2011, Ethiopia estimates US $ 150 billion (an average of US $ 7.5 billion annually) for the full implementation of the CRGE strategy, the climate resilience component until 2030. The National Adaptation Plan (NAP-ETH) under Ethiopia's Climate Resilient Green Economy is estimated to cost approximately US$ 6 billion per year for implementation over fifteen years (2016 – 2030). In sum, US$ 90 billion is prorated proportionately across a number of sectors, namely Agriculture, Forestry, Health, Transport, Power, Industry, and Water. It is worth noting that the recent updated NDCs document estimates that Ethiopia requires USD 316 Billion investments from 2021 - 2030 to achieve the set climate related targets as described out in the updated CRGE, NAP-ETH and NDCs.

The vast majority of finance spent on those climate change-related projects in the last several years came from Ethiopian public funds, followed by the international aid, and the private sector finance playing almost no role. However, it is found difficult to account, measure and analyze climate change mitigation and adaptation resource allocation and spending categorically, in the absence of well-designed budget tracking or coding system that identify allocations and expenditures linked to CRGE.

Given Ethiopia's current state of economic dynamics and its low-level of GHG emissions, and agriculture and forestry sectors being the main source of its GHG emissions, the emphasis of the climate change response should be more of climate change adaptation than mitigation measures. With all difficulties to strictly account allocations and spending of climate-related activities and categorization, the recent study indicates that Ethiopia's efforts on the climate change responses in the last ten years were more skewed to mitigation than adaptation actions (EFCCC, 2019). However, it is worth noting that most mitigation interventions do have adaptation co-benefits.

The relative importance of finance towards adaptation and mitigation may change over time. In the short to medium-term, climate finance targeting adaptation measures may constitute a lion's share as the country's contribution to GHG emission is low. However, with envisaged economy-wide structural transformation towards climate resilient and greening the economy, the relative size of climate finance towards low carbon development activities may increase. The balance of actions aimed at addressing the two policy objectives provides important information on the nature of the government's response to the public policy challenge of climate change.

5.1 Climate Finance requirement, gaps and projected funding from the International Financial Sources

The updated NDCs plan estimated 316 billion investments, 40.5 billion and 275.5 billion for adaptation and mitigation related interventions for the period of 2021 - 2030 towards the achievement of its national and international level commitments. However, the international resource allocations for climate change responses will increase in the upcoming years, the review of the past performance, trend and projections, there is still a huge financial gap against the estimated resource requirement. The following tables depict the climate finance projections and gap for the achievement of the NDCs targets and project international climate funding.

Table 9: Estimated financing gap for the NDC adaptation sectors

NDC Adaptation sector	budget (US$ Million)	financing gap (US$ Million)
Agriculture and forest: Microlevel household level and biodiversity response	7,600.00	3,712.84
Urban development: urban planning and risk management, local community development and infrastructure	8,266.20	4,038.30
Water, Irrigation & Energy: power generation, access to energy and potable water, irrigation schemes	24,386.00	11,913.34
Health: reduced tropical diseases, improved household sanitation and safe water supply and improved health facilities	234.40	114.50
Total	**40,486.60**	**19,779.00**

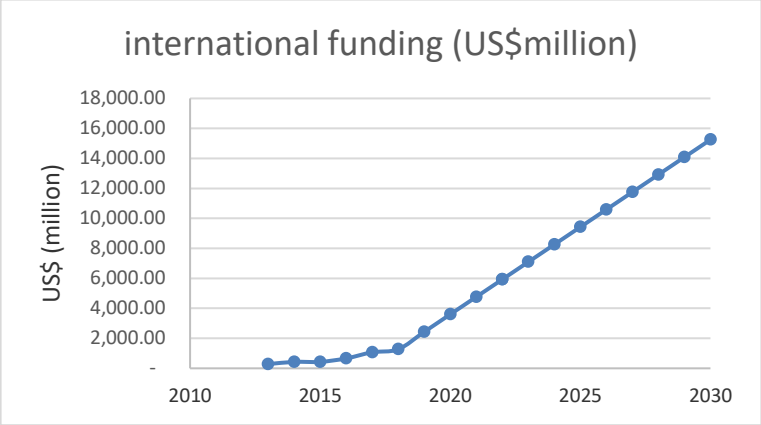
Source: EFCCC (2021)

Table 10: estimated financing gap for the NDC mitigation sectors

NDC Mitigation sector	Budget US$ million	Financing gap US$ million
Agriculture: improved value chain, mechanization, diversification of livestock mix, pasture management and irrigation scheme	95,873.88	50,484.48
Forestry:reduced, deforestation, afforestation and sustainable forest management	765.69	403.19
Mines: biodiesel& ethanol in fuel mix, plantation and LPG promotion	45.69	24.06
Urban development: landfill gas management, reuse, reduced nd recycling & integrated infrastructure planning and energy efficient building	629.57	331.51
Transport: improved public transit in Addis Ababa light rail transit, improved public transport infrastructure, promotion of hybrid and electric vehicles and improved emission standards	16,000.00	8,425.15
Water & energy: renewable energy, climate resilience water land management, energy efficient appliance and irrigation light,	80,353.25	42,311.76
Industries: clinker substitution, waste heat recovery, energy efficiency, fuel switch, alternative production processes and improved industrial waste management system	81,785.32	43,065.85
Total	**275,453.40**	**145,046.00**

Source: EFCCC (2021)

Figure 12: projected international financial flow for climate related financing



Source: EFCCC (2021),

6 Major Stakeholders and Flagship Projects and Programs in Response to the Climate Change

Ethiopia's emissions are estimated at 150 Mt CO_2e in 2010.[5] 50% of the emissions are generated from the agriculture sector, the overwhelming majority of which were from livestock (approximately 40% of national GHG emissions). The recent updated NDCs plan targets to reduce economy-wide GHG emissions to 277.7 MtCO2e in 2030 as compared to 2010 BAU scenario, which represents 68.8% of emissions reduction by 2030. To reduce GHG emissions from this sector, the CRGE strategy identified significant abatement interventions from improved soil management, watershed management, crop and nutrient management, avoided deforestation, livestock value-chain efficiency, livestock diversification, amongst others. The second largest contributor of GHG emissions was the forestry sector; nearly half of all forestry emissions were tied to deforestation to expand agricultural land, and the other half to deforestation due to fuelwood collection. In response, the CRGE strategy targeted significant abatement through fuel-efficient cookstoves, electric cookstoves, and afforestation and reforestation.

The contribution of the transport, water and energy, industry, and buildings sectors to Ethiopia's national GHG emissions was 3% each, i.e. a relatively minor role (although both industry and transport emissions are projected to increase through 2030 and account for larger shares than in 2010). For the transport sector, where most emissions were tied to road transport by passenger and freight vehicles, the strategy prioritized light rail and fuel efficiency. In the buildings and urban sector, the CRGE strategy has prioritized efficient lighting to date and in the industrial and manufacturing sector, where the cement industry was the most significant source of emissions (accounting for 50% of industry emissions), the CRGE strategy pointed to abatement from clinker substitution and usage of biomass and energy efficiency techniques (EFCCC, 2019). The updated NDC plan acknowledges the departure on the categorization of sectors by adapting the IPCC guideline.

Towards meeting the international and national climate change targets, the commission in collaboration with the ministry of finance and other sectoral national and subnational entities undertake several flagship programs supported by the international support mechanisms, private and public sectors. Among many flagship projects currently implemented by the commission and funded with multilateral funders are the NFSDP, Forest Transformation Unit, REDD+ Investment Program, and many other projects working on climate change negotiation, combating desertification. The major funding partners are UNDP, WB, EU, the UK, Denmark the Swedish, and

[5]Federal Democratic Republic of Ethiopia, Ethiopia's Climate-Resilient Green Economy: Green Economy Strategy (2011)

Norwegian governments. Many federal and subnational sector ministries and bureaus are partners for the implementation of the projects. With regards to funding, the government of Norway has committed to provide USD100 million to finance a four-year project of major forest development investments in REDD+ in Ethiopia. Project stakeholders include line ministries at federal level, Regional Administrators and Regional Agriculture Bureaus and wereda level corresponding sector offices.

Other Flagship programs namely ESIF-SLM, PSNP and LMP are funded by multiple donors (including GIZ, USAID and WB). The NFSDP is also another strategic framework highly skewed to climate change mitigation attributed to its strategic objectives of increasing the country's forest cover to enhance carbon sequestration meeting the climate convention agendas (CDM and REDD+ projects) and domestic demands for forest products (Eshetu at al 2018); and the program is with high opportunity for accessing climate finance. The same report indicates that CRGE and NAP have effectively integrated mitigation and adaption and are highly relevant and devoted to address food security in the era of climate change. Updated NDC in all sectors have also much relevance.

Table 11: Major stakeholders and related flagship programs with high relevance to climate Change

Flagship programs	Stakeholders supporting project implementation
1. ETH-NAP 2017	All federal line ministries and regional sector Bureaus agencies
2. CRGE 2011	All federal line ministries and regional sector Bureaus agencies
3. INDC 2015	All federal line ministries and regional sector Bureaus agencies
4. GTP II, 2015/16 -2019/20	All federal line ministries and regional sector Bureaus agencies
5. AGP2	MoA
6. ESIF-SLM 2010	MoA
7. ASPIF, 2010-2020	NDRMC
8. PSNP 4 (2015-2020	NDRMC
9. LMP 2015-2020	MoA
10. NFSDP 2018 – 2027	EFCCC
11. REDD+?	EFCCC, MoA

Sources: Zewdu, 2018.

7 Priority Interventions on Agricultural Projects for Improved Access to International Climate Finance

To realize the country's commitment to contribute to the reduction of GHG emission and mitigate climate change, Ethiopia requires huge amount of financial resources and capacity building with regards to accountability, transparency, finance tracking (Eshetu et al, 2014) and Measuring Reporting and Verification (MRV) of GHG emissions and removals. Limited number of qualified experts at all levels are recognized as a major capacity gaps to execute project activities and access climate finance from various sources, namely GEF, LDCF, GCF, AF, UNDP, WB and other multilateral, bilateral and private sector support instruments working in the areas of adaptation and mitigation.

The 1OYDP, Ethiopia's NAP and recently developed Ethiopia's updated NDC have identified priority areas of interventions and investment projects on climate change adaptation and mitigation for the agriculture and forestry sector. The core strategic documents to the identified interventions are presented in the following table:

Table 12: Identified Priority Interventions under the Agriculture and Forestry sector for accessing Climate finance

Strategic policy action plans	Number of Sectoral Climate and development Policy interventions		Total development Policy interventions
	Agriculture Sector	Forest Sector	
ETH-NAP (2017)	6	6	12
Updated NDCs-	8	7	15
10YPDP	14	5	19
Total Sectoral interventions	28	18	46

Source: EFCCC and and UNDP, (2021); Climate change and economic development interventions by strategy and sector

All project initiatives and interventions listed in the updated NDCs and the ten-year national planning document are considered as most priority areas on potential climate change project in the agriculture and forest sector for improved access to international climate financing sources. These policy and programmatic interventions in the agriculture and forest sector are not only potential interventions for accessing international climate financing but also they are potentially climate smart agriculture believed to enhance food production and security.

Table 13: Mitigation focused Priority areas on potential climate change for agricultural, food security and forest sectors

A. Updated NDCs Agriculture Sector				
Agriculture policy interventions	**Indicator (Unit)**	**Responsible/Implementing sector**	**NDCs-reporting Sector category**	**Climate Smartness**
Dairy, red meat and poultry intervention packages • Enhancing efficiency & productivity in livestock subsectors	# of improved cows GHG-intensity of agricultural GDP	Ministry of Agriculture	Livestock Sector	Enhance food security (food security smartness)
Agricultural mechanization • Replacing cattle/oxen by tractors for farmers and smallholders	# of heads of livestock reduced # of tractors distributed	Ministry of Agriculture	Livestock Sector	Reduce methane emission & human labour (access to food); Carbon smartness & food security smartness
Increase in the share of poultry. • Replacing non-dairy cattle stock by chicken (supply side) & inducing a demand shift from beef to chicken	# of non-dairy cattle replaced	Ministry of Agriculture	Livestock Sector	Reduce methane emission (carbon smartness)
Oilseed feeding • Improved feeding to reduce emissions from enteric fermentation.	Improved feeding deployed (tons)	Ministry of Agriculture	Livestock Sector	Reduce methane from enteric fermentation (carbon smartness)
Sustainable agriculture • Increasing the share of agricultural land under sustainable management practices • Reducing pre-harvest losses and land	Hectares of agricultural land under sustainable management practices (ha)	Ministry of Agriculture	LUCF Sector	Increase productivity and food availability (food security smartness)

converted for agricultural infrastructure.				
Grassland improvement • Additional carbon sequestration through grassland improvement • Lowlands Livelihoods Resilience Project	Hectares of grassland improved (ha)	Ministry of Agriculture	LUCF Sector	Carbon smartness
Soil improvement • Enhancing *manure management,* • *Replacing use of fertilizers by use of organic fertilizers* • Soil fertility management: Substituting inorganic fertilizer by compost	Hectares of farm land improved (ha) Amount of Compost replacing inorganic fertilizer per ha of land (Kg/ha)	Ministry of Agriculture	Managed Soil Sector Livestock sector	Reduce emission from manure burning and reduces emission from inorganic fertilizer (carbon and nitrogen smartness)
B. Updated NDCs- Forest Sector				
Forest Policy Interventions	**Indicator (Unit)**	**Responsible/Implementing sector**	**NDCs-reporting Sector category**	**Climate Smartness**
Reforestation: • Reforestation of 3 million ha of land (conditional pathway) by 2030 • 20% moist Afromontane, 60% dry Afromontane, 10% acacia-commiphora, 10% combretum-Terminalia)	Area reforested/afforested (ha) Share of forest area of total land area (%)	EFCCC	LUCF Sector	Enhancing Carbon sequestration (carbon smartness)
Restoration: • Restoration of 5 million ha of land (conditional pathway) by 2030 and 9 million ha by 2050 • 10% moist Afromontane, 60% dry Afromontane, 10% acacia-commiphora, 20% combretum-Terminalia)	Area reforested/afforested (ha) Share of forest area of total land area (%)	EFCCC	LUCF Sector	Enhancing Carbon sequestration (carbon smartness)
C. Energy Policy Intervention	**Indicator (Unit)**	**Responsible/Implementing sector**	**NDCs-reporting Sector category**	**Climate Smartness**
Household energy use: • Fuel switch: shift from residential biomass energy demand to electricity • Biomass efficiency: Improved cook stoves	Energy demand shifted (TJ) by type of fuel switch.	EFCCC, MoWIE	Energy Sector	

Source: EFCCC and UNDP, 2021.

Table 14: Adaptation-focused Priority areas on potential climate change for agricultural, food security and forest sectors

Adaptation Intervention (Commitment)	Indicator(s)2	Baseline (2018)	2030 Target
Sector: Agriculture			
Enhance food security by improving agricultural productivity in a climate-smart manner (promote yield increasing techniques)	Productivity of rain fed crop land (based on average for teff, wheat, barley and corn) Area under irrigation (based on corn, wheat, tomatoes & onions)* Crop production through irrigation	28.9 quintals3/Ha 62,050 Ha 8 million quintals	45.9 quintals/Ha 225,913 Ha 38 million quintals
Diversify livestock & animal mix, including promotion of poultry and small ruminants	Productivity of poultry and small ruminants (Tons) Percentage of improved livestock number (dairy)	Specialized poultry commercial–33,100 Tons Household– 13,200 Tons Sheep – 66,000 Tons Goat – 44,000 Tons Dairy – 2.7%*	Specialized poultry commercial – 80,900 Tons Household – 16,200 Tons Sheep – 324,000 Tons Goat – 282,000 Tons Dairy 17%*
Enhanced climate resilience in livestock	Percentage of coverage of animal health services	Dairy – 11% Beef – 7%, Small ruminants – 7%	Dairy – 42% Beef – 28% Small ruminants – 28%
Prevent & control the spread of climate-driven vector-borne diseases	Percentage reduction of crop and animal disease cases	To be established	30% reduction from 2022/2023 baseline (to be established)
Improve rangeland & pasture-land management diversification, including selection of drought-resistant animal breeds	Percentage of improved content in dry feed	Local dairy – 77% Cross-breed – 41% Exotic – 33%	Local Dairy – 100% Cross-breed – 100% Exotic – 100
Expand the use of improved crop varieties with climate resilient characteristics	Improved seed coverage (Ha)	Teff – 31,000 Ha Barley – 70,000 Ha Wheat – 413,000 Ha Corn – 438,000 Ha	Teff – 100,000 Ha Barley – 193,000 Ha Wheat – 673,000 Ha Corn – 823,000 Ha
Strengthen crop disease & pest monitoring systems in vulnerable areas	Vulnerable districts covered by such monitoring systems	Indeterminate	All districts nationally
Strengthen drought & crop insurance mechanisms for climate risk management	Number of farmers (gender disaggregated) covered by drought and crop insurance	Indeterminate	30% increase from 2022/2023 baseline (to be established)
Sector Forestry			
Restoration & reforestation through tree planting	Hectares reforested/ restored (Ha)	2.6 million Ha	9 million Ha
Increase national forest coverage	Percentage of National forest coverage	15.5%	25-30%
Enhance sustainable forest management	Area of natural forest under sustainable forest management	2 million Ha	4 million Ha
Improve sustainable utilisation of forest resources	Number of green jobs Created Export earnings from sustainable forest products	0.2 million 41.4 million USD	5 million 221 million USD
Implement forest protection	Area of forest protected from diseases, pests and fire		

and health enhancement measures in natural forest ecosystems	Proportion of federal & regional institutions'improved capacity for forest protection	To be established	17.2 million Ha To be established
Sector: Land Use and Natural Resources Management			
Enhance climate resilient livelihoods of wildlife resource dependent communities in protected areas	Number of dependent Communities benefiting from climate resilient wildlife resources	30,000 people	1.5 million people
Enhance sustainable natural resources development, management, & watershed protection	Number of PFM associations vested with legal personality*	-	To cover 10,000 catchment areas*
Sector: Water			
Integrated watershed development in million Ha	Area under integrated watershed development	2.24 million Ha	10 million Ha
Improve access to potable water to strengthen community climate resilience	Potable water supply per capita	19.36 litres/capita/day	Rural – 25 litres/capita/ day by 2025/within 1km Urban – 50-100 litres/ capita/day by 2025
Expand the construction of medium and large-scale irrigation systems to enhance food security	Number of ha under medium and large-scale irrigation schemes Percentage of improved irrigation technologies for medium and large-scale irrigation Percentage of water use efficiency in medium & large-scale irrigations	0.49 million Ha 2% 30%	1.2 million Ha 20% 50%

Source: FDRE, EFCCC (2021), Updated NDCs

The alignment and matching of the identified priority climate change adaptation and mitigation interventions from the updated NDCs, NAP and Ten-Year National Development plan are assessed against the focus, emphasis and priority of international financing instruments to ensure strategic alliance and assist alignment to the requirements of the major multilateral climate finance agencies. To this effect, most of the identified priority climate adaptation and mitigation interventions are very much in line with the focus and priority areas of GEF, AF, GCF, LCDF. SCCF, and other bilateral, multilateral and private climate finance sources. The following table indicates the degree of alignment of the identified interventions with selected climate finance agencies or international support funds as highly relevance (H), medium (M) and low (L).

Table 15: Alignment of updated NDCs in Agriculture sector with the focus areas of key Climate Financing Instruments

. Updated NDCs Agriculture Sector													
Agriculture policy interventions	Major Climate financing instruments												
	LDCF		AF		GCF	GEF			WB		ODA/DAC	AfDB	
	Vulnerability	Adaptation & resilience	NAP priority	Climate Smart	Mitigation	Climate	Biodiversity	Land degradation	GRD	LRC	$100 Billion for <1.5°C	Water SS & Sanitation	Agriculture & Rural Dev't
Dairy, red meat and poultry intervention packages: Enhancing efficiency and productivity in livestock subsectors	H	H	H	H	H	H	L	H	H	H	M	H	H
Agricultural mechanization: Replacing cattle/oxen by tractors for farmers and smallholders	H	H	M	M	M	M	M	M	M	H	L	M	H
Increase in the share of poultry: Replacing non-dairy cattle stock by chicken (supply side) and inducing a demand shift from beef to chicken	H	H	H	H	H	H	H	H	H	H	H	H	H
Oilseed feeding: Improved feeding to reduce emissions from enteric fermentation.	H	H	H	H	H	H	H	H	H	H	H	H	H
Sustainable agriculture Increasing the share of agricultural land under sustainable management practices Reducing pre-harvest losses and land converted for agricultural infrastructure.	H	H	H	H	H	H	H	H	M	H	M	H	H
Grassland improvement Additional carbon sequestration through grassland improvement: Lowlands Livelihoods Resilience Project	H	H	H	H	H	H	H	H	H	H	H	H	H
Soil improvement Enhancing *manure management: Replacing use of fertilizers by use of organic fertilizers*	H	H	H	H	H	H	H	H	H	H	H	H	H
B. Updated NDCs- Forest Sector													
Forest Policy Interventions													
Reforestation: Reforestation of 3 million ha of land (conditional pathway) by 2030: 20% moist Afromontane, 60% dry Afromontane, 10% acacia-commiphora, 10% combretum-	H	H	H	H	H	H	H	H	H	H	H	H	H

Terminalia)													
Restoration: Restoration of 5 million ha of land (conditional pathway) by 2030 and 9 million ha by 2050: 10% moist Afromontane, 60% dry Afromontane, 10% acacia-commiphora, 20% combretum-Terminalia)	H	H	H	H	H	H	H	H	H	H	H	H	H
C. Energy Policy Intervention													
Household energy use: Fuel switch: shift from residential biomass energy demand to electricity Biomass efficiency: Improved cook stoves	H	H	H	H	H	H	H	H	H	H	H	H	H

Note: GRD stands for Green Resilience Development; LPC stands for Leverage Private Capital; ODA and DAC supports allocation of funding for meeting the USD 100 billion target towards meeting objectives of keeping temperature increases below 1.5°C.

Along with the assessment and development of strategic climate programs namely Eth-NAP, updated NDCs, CRGE and 10 YPDP and other climate change—focused capacity gap assessment reports; key capacity development gaps and needs were analyzed and identified in relation to climate change responses and financing for the various new and ongoing projects. From the review of reports on the implementation of the ongoing and completed flagship programs/projects and overall assessment of the implementation of CRGE strategy from 2011 – 2019, this report summarizes and highlights the key capacity gaps in relation to climate change finance. The key capacity development gaps and needs for increased resource mobilization from the international financial institutions and other sources and recommended actions for building capacity are summarized below.

8 Capacity gaps, training needs and challenges of accessing climate finance

The CRGE implementation assessment report (2019) and NAP-ETH (2020) indicate that Ethiopia is challenged by the capacity gaps in two major areas: capacity gap to develop a well-formulated plan and capacity to implement, track and report climate response interventions. Fulfilling the stringent requirements of various financial mechanisms to access finance is another challenge need to be addressed. Tracking climate related finance requires detailed and timely information on different projects and programmes. However, there is lack of organized database at national as well as subnational levels. This requires a need for designing a system for database and knowledge management on climate financing at all levels through capacity building programme for CRGE facility Units and institutions engaged in resource mobilization, implementation, monitoring and reporting and fund management.

Building a strong coordination and communication mechanisms and platform to exchange relevant information on climate related policy and other operational issues is paramount to facilitate resource mobilization. Such platform can also be used for creating awareness for all stakeholders on climate related investments and experience sharing (Tadele F., 2019). Likewise, there are ongoing works related to vehicle emission tax regime, establishing special grant for the Green Legacy and restoration of degraded landscapes, establishment of climate finance tagging and tracking system through the support of FCDO as well as an attempt to upgrade MoF accreditation to GCF from 50 million to up to 250 million USD to address the identified capacity gaps.

Table 16: Capacity Gaps/Needs and Recommended Actions for enhanced Access to Climate Finance

Identified Major Capacity Gaps/Needs	Recommended actions to bridge the capacity gaps
Improve the climate change legal and institutional architecture to mobilize increased resource and unlock maximum beneficiation of current investments in climate change, including for climate change adaptation.	Tailored training on the overall institutional structure of EFCCC, MoF and CRGE facility/secretariat with regards to the fund mobilization, management and eligibility of climate financing vehicles and systems as well as Safeguard standards and protocols need to be conducted. More importantly it is highly advisable that trainees are mentored with senior experienced proposal writers. And also training on the requirement of donor's financial and performance reporting delivery.
Knowledge in project proposal development	Tailored training with practical exercises to enhance skill, experience and knowledge on project proposal writing including understanding of theory of change & log frame may contribute to improve the capacity for accessing financing.
Knowledge in planning and analysis (integration, risk assessment, cost benefit analysis, prioritizing investment)	Tailored training on identifying and prioritizing anticipated risks and mitigation measures; Prioritizing typologies in terms of finance, felt need etc
Absence of strong database and M&E system integrating climate change	Prepare tailored training on M & E and Result based project management. Project proposal with weak M&E system is subject to rejection
Knowledge on climate science	Tailored training on the science of climate change and priority sectors in relation to the scope of funders
Knowledge on new technology and system of accessing information	Tailored and practical orientation on how to prepare project application following the templates of the various donors for online submission.

Capacity for enhanced mobilization and involvement of non-state actors including professional societies, development partners and donors.	Create strong partnership/network among non- state actors and others. Involve professionals and civil society actors in adaptation planning, implementation and monitoring.
Strengthen adaptation finance tracking	Orientation session on financial tracking from public and private financing, categorization into adaptation and migration financing. Conduct training on transparency, accountability & reporting in view of the requirement of the Paris agreement.
Detailed budgets preparation, analysis & tracking system with clear demarcations between climate response & other development needs.	Training on budget preparation, analysis and tracking
Review and develop a comprehensive resource mobilization strategy from international support mechanisms	Training on finance mobilization strategy, meeting stakeholders, defining development projects differently from NDCs, CRGE, NAP and other climate oriented action projects. This may need knowledge on the science of climate change, adopting a blended financing approach to resource mobilization to tap into all appropriate financing sourcing such as international multilateral and bilateral climate finance, private sector, development partners, and domestic sources.
Delivery of services with regards to procurement, budget flow/fund transfer and staff hiring	For a better and timely implementation of the project activities, create/strengthen a dedicated strong and facilitative finance and administration unit which is tied strongly with the project office where every purchase, procurement and budget release is easily facilitated for every project activities.

This review has found out that a more comprehensive capacity development is highly recommended to address the identified capacity gaps and strengthen the technical and institutional capacity to increased access to climate finance, instead of piece-meal approach. However, it does not undermine the need to deliver prioritized tailored training focused on tips for proposal writing guidelines and orientation to guidelines/requirements and formats of selected donors. This report has provided hyperlink and references to useful websites, information/training portals and resources on the specific requirements, guidelines and templates of the major climate finance funds with descriptions for easy access and future reference.

9 Basic Considerations and Preparation for enhanced access to International Climate Finance

The international financial instruments for supporting climate change response intervention have different guidelines, requirements and templates for expression of interest, concept notes and project proposal writing. Guidance on the proposal writing, training materials for project proposal preparation and hyperlinks that provide the specific guidelines, requirements and templates of the major climate financing source websites are annexed for further reading, leaning and reference. Those web-links are like toolkits and guides, and they are helpful materials for understanding the detail and specific fund requirements, guidelines and templates, eligibility and timelines of the financing institutions. A Resource Guide to Climate Finance, an orientation to sources of funds for climate change programmes and action, excellent summary of the requirements and guiding notes by ACT Alliance is also annexed for reference. The guide identifies the major funds available within the global climate finance architecture that may be relevant for actors applying for funding for climate-related programmes and projects. It covers 25 multilateral, 16 bilateral, 13 private, 10 faith-based, 3 national, and 1 regional grant providers[6].

[6] This guide is like a toolkit that provides relevant information on the major climate financing sources and assists efforts in targeted resource mobilization from the international multilateral, bilateral and private sector support mechanism for climate change. The Guide contains climate funds including background information, sectoral and regional focus, eligibility criteria, application timelines, contact details and online links for additional information.

This section highlights the major fundamental considerations and institutional preparedness for resource mobilization and proposal preparation. It provides key preparatory actions that assist for prioritization, targeting and development of good quality proposal for enhanced access to climate finance. They are fundamental institutional preparation and consideration tips for applicants.

9.1 Mapping and targeting the potential climate finance funds and institutions

Mapping budget allocations against the marked programs and projects is the most difficult task to achieve the climate change goals set for at national and global level, this happens because as it is clearly articulated in (Spencer et al, 2015) climate finance is highly technically and politically complex and a crucial policy vector both at national and international level for ensuring the transformation of fossil fuel dependent economy to a low-carbon and climate-resilient economy. It has been also a key issue in the international negotiations to establish a new global climate agreement in 2015 and beyond. To identify future climate financing potentials and overcoming challenges of climate financing, it is important to document existing investments and financing in climate change mitigation and adaptation and ensure alignment and coherence of project ideas with what needs to be achieved and financed at global and national level. The 2020 projections of Climate Finance towards the USD 100 billion goal was estimated based on pledges by the bilateral, multilateral and private financial institutions.

Developed countries are projected to increase the levels of public climate finance – bilateral and multilateral – to close to USD 67 billion by 2020 compared to almost USD 37.9 billion in 2013 and close to USD 43.5 billion in 2014. Prior Substantially large climate financing has been also provided by the private sector. Furthermore, an IFC report launched in recently shows that the historic global agreement on climate change adopted in Paris helped to open up nearly $23 trillion in opportunities for climate-smart investments in emerging markets between now and 2030 (IFC, Word Bank Groups, 2021).

Generally, studies show that climate finance flow is characterized by a continues incremental trends in the raising the funds for investment for mitigation and adaptation signal that the developing countries need to strengthening their capacity to mobilize and access the raising climate finance through building competent and effective capabilities. The experience and current institutional structure and capacity and developed climate change adaptation and mitigation strategies and plans are springboard to develop and enhance the overall institutional preparedness for tapping the future climate financing opportunities and potentials.

9.2 Weighing and Aligning climate change programs/policies and projects with the Rio+ climate marker and other indicators

It is important to evaluate the extent of Ethiopia's readiness for accessing the project climate finance in view of weighting the existing climate programs and projects using the Rio+ marker and other climate indicators. According to the OECD DAC Rio Markers for Climate Handbook (OECD DAC), the Rio markers for climate (climate change mitigation and climate change adaptation) are important source of information on the degree to which projects/programs across development sectors target climate actions. Because Rio markers for climate aim to capture activities that mainstream the Rio Conventions' objectives into development cooperation; a scoring system of three values is being used to evaluate status of Ethiopia's climate interventions and development projects in view of meeting the Rio conventions' objectives.

9.3 Understanding the requirements of international climate finance sources

Mapping out and understanding of the requirements of the various international climate finance funds; developing and maintaining strong database of the major funds and sharing with the relevant experts and institutions are paramount actions as part of in advance preparation for climate response resource mobilization. Continuous tracking and monitoring of websites of the funding sources and establishing and maintaining rapport with key officials and experts at various levels help to proactively prepare and response to the on-going and upcoming funding opportunities.

9.4 Translating the NDCs into detailed programmes and projects

Ethiopia has developed and submitted a comprehensive and updated NDCs aspiring to reduce emissions from all sectors by 68.8% (increasing the emission reduction rate from 64% to 68.8% from the 2016 projection) by 2030 from BAU scenarios. The NDCs are well-anchored on the recently developed 10- years development plan (10 YDP) that is guided by CRGE strategy and national development vision. The updated NDCs consist of two sets of policy interventions: (i) the unconditional pathway which will result in absolute emission level of 347.3 Mt CO2 e in 2030, representing a reduction by 14% in 2030; and (ii) the conditional pathway which will decrease absolute emission level of 125.8 Mt CO2e. Updated NDCs estimated climate finance investment of about USD 316 billion, out of which USD 40.5 billion (12.8%) goes to implementation of adaptation interventions while USD 275.5 billion (87.2%) goes for implementing mitigation activities. The updated NDCs has anchored on review of series of adaptation plans, including ETH-NAP, NAP implementation roadmap, and NAP resource mobilization strategy) and has identified 40 adaptation intervention across all sectors. The significant portion of adaptation and mitigation interventions is from the agriculture and forest sectors. Moving forward, it is paramount to get prepared for the development of full-fledged project proposal and translating the NDCs plan document into specific programme, project and intervention documents in line with the specific requirements and guidelines of the identified potential climate finance channels and mechanisms.

9.5 Establishing Database, Resource-hub and Knowledge Management System on Climate Change

Ethiopia has done a comprehensive assessment towards the preparation of the updated NDCs. In addition to the assessment report and updated NDCs, it would be helpful and instrumental to prepare a more comprehensive database, resource center and knowledge management system to store climate change data across all sectors for preparation of high quality proposal timely. Well-established database and resource center can also include unsolicited project ideas, concept notes, expression of interest and abstracts that can be fully developed whenever required or calls for proposal issued.

9.6 Strengthen the Project Design and Management Capacity of Designated Institutions

Given Ethiopia's huge vulnerability to the climate change and opportunities to access and mobilize climate finance at national and international support mechanisms, the country has set up and assigned designated institutions for the technical, coordination and management roles of climate finance. The Ministry of Finance is a designated entity for the administration and management of the fund while the EFCCC holds the technical responsibility. This assessment

has found and confirmed that the institutional coordination mechanism and the roles and responsibilities of the various entities to lead and manage the climate finance facilities need to be reviewed and strengthened to respond to the current ambitious climate actions.

9.6.1 **Investment in resource mobilization**: The resource mobilization function needs to be adequately resourced. Both the vertical and horizontal structures and institutions and individuals in charge of initiating, leading, coordinating, monitoring and liaising the resource mobilization responsibilities for climate change need adequate staffing levels and funds for activities from liaising with funding partners to funding communication products. The MoF and EFCCC need to develop a comprehensive resource mobilization strategy that recognize, acknowledge and reward individual, team and institutional level efforts for climate finance mobilization. The current CRGE facility mandate, structure and capacity need to be reviewed and improved to respond to the current and upcoming climate change challenges and responses. The relevant institutions participating in the mobilization of climate finance at various levels need to allocate time and funding for resource mobilization activities.

9.6.2 **Strengthening programme design, monitoring and evaluation** departments of the relevant sectors and establishing core team with defined responsibilities and deliverables of the designated entities for proposal development/resource mobilization tasks; continuously developing their capacity; and setting up a platform for knowledge sharing and technical support among concerned experts and officials are important conditions for effective resource mobilization efforts. Analysis of current climate change related resource volumes, allocations, expenditures and forecasts across the sectors and countries need to be worked out and informed decisions and choices have to be made by the management. Establishing strong database and knowledge management system consists of data collection, compilation, analysis and database management of climate change relevant programs and projects list of climate relevant initiatives such as the CRGE strategy, NDC, NAP, etc. and accessing, maintaining and sharing organized data, best practices and innovations from various climate-focused websites are important instruments for developing quality proposals timely.

9.7 Project Development, Quality Assurance and Learning:

Preparation of list of project documents such as expression of interest, concept notes, project proposal, risk analysis, environmental impact assessment, logframe, budget etc require collaborative, coordinated and team work. The CRGE strategy and NDCs document set out bold and ambitious enough targets and lay out indicative strategic direction and priorities for the development of programmatic and thematic interventions across sectors for the coming years. The project design team needs to be well-equipped and familiar with the requirements and guidelines of the funding agencies. To ensure the required level of quality standards, the proposals need to be reviewed by senior level and experienced experts. The team needs to take account and record of learning from each stages of the project development as part of learning. The internal and quality controls, due diligence and accreditation processes and system should not be overprotective and increase bureaucratic hurdles, rather should be swift and facilitative.

10 Conclusion and Recommendations

The future climate variability and change are expected to worsen the adverse impacts of climate change on agriculture and food security, by way of potentially accelerating already high levels of land degradation, soil erosion, deforestation, loss of biodiversity, desertification, recurrent floods, as well as water and air pollution. Recurrent droughts and floods pose the greatest challenge and threat to food security, livelihood and live of large number of the population in Ethiopia. According to the CRGE, NAP-ETH and updated NDC strategic document, the agricultural, water resources, and human health sectors will be most negatively impacted by climate change, followed by the infrastructure sector. Ethiopia has developed and submitted its Nationally-Determined Contribution to the UNFCCC in 2016 and more recently the revised NDCs in 2021, in support of the country's efforts to realize its development goals as laid out in its medium and long-term national plans and its Climate Resilient Green Economy (CRGE) Strategy and NAP-ETH.

Ethiopia is one of the developing countries least responsible for global climate change and most vulnerable to its impacts. A multitude of actors are involved in directing climate finance to developing countries, both to support low-carbon development and to help countries adapt to the severe impacts that are already being felt. The Green Climate Fund (GCF), in 2020 funding the first year under its first replenishment period (GCF-1), continues as the largest multilateral climate fund contributing to the region, followed by the Least Developed Countries Fund (LDCF), the Global Environment Facility (GEF) Trust Fund and the World Bank-administered Clean Technology Fund (CTF). For the funds tracked, Climate Funds Update (CFU) data indicates that USD 5.9 billion has been approved for 827 projects and programmes throughout SSA since 2003. Just over a third, or 37% of the approved funding from these multilateral climate funds has been provided for adaptation measures (Climate Finance Regional Briefing, 2020).

Ethiopia showed its preparedness in response to the global climate goal and came up with sets of policies/strategies and investment projects that have potential contributions to climate change mitigation and adaptation. Key policy interventions are clearly articulated in the CRGE strategy, updated NDCs, 10YDP and ETH-NAP which all are highly aligned each other and with the SDGs. Likewise, Ethiopia has accessed large amount of climate finance (USD >1090 million) from multiple sources such as bilateral, multilateral public finance and private sector, although it is far to reach the target. The country has setup a national financial mechanism called the CRGE Facility Secretariat to support the implementation of the priorities set out in the CRGE Strategy and the development and implementation of CRGE Investment Plans. The Facility is based and managed by MoF with the technical support from the EFCCC. The Facility is an institutional set up that mobilizes and manage domestic and international climate finance to support the institutional capacity building and implementation of the country's climate change adaptation and mitigation projects.

Looking at the trend in the past and recent years, climate finance flow for climate change adaptation and mitigation responses is expected to raise in the coming years. As indicated in the report by the IFC (2021), the historic global agreement on climate change adopted in Paris helped open up opportunities of projected climate finance of nearly USD 23 trillion for climate-smart investments in emerging markets between now and 2030 towards the 2°C target for the 2021-2030 climate investment. Likewise, other climate change response support from other climate finance channels will be scaled-up considering the accelerated adverse impact of the extreme weather and climate change and the urgent need for climate change mitigation and adaptations measures. To this effect, climate finance recipient countries need to get well-prepared to access as much resources as possible to meet their national and globally set

climate related targets. Sections 5 – 9 of this report have indicated various policy, institutional, structural and operational areas that require improvements for enhanced access to climate finance. The following are come out as priority and fundamental.

Translate NDCs into well-grounded investment programmes: The recently developed NDCs has brought an ambitious, economy-wide and forward looking climate response indicative plan. This is complemented by the ten-year national development plan that lay out detail climate compatible sectoral plans and strategies. Having those foundations on the ground, it is paramount to form team of experts or designated entity to develop well-grounded project proposals and NDC investment plans that best meet the specific standards of the target funding agencies. Constituting the team and head-start preparation will give enough time to internalize the specific requirements of the funding agencies and develop the proposal that best fit the requirements and specific standards.

Consider the option of establishing Climate Investment Facility: Look for opportunities to strengthen the finance institutions, through channeling the climate funds to the existing CRGE facility or establishing new climate investment facility towards increased collaboration across the various sectors and actors and climate finance mobilization. Explore mechanisms for effective national cooperation and coordination that address concrete specific institutional, legal, planning and programmatic challenges that hinder effective resource mobilization and goes beyond addressing the immediate challenges, rather transcend and facilitate the achievement of country's ambitious national development and CRGE vision. Continue to emphasize climate mainstreaming efforts, so that mainstreaming concretely and effectively serves climate finance mobilization and action, the development sector actively takes account of climate change risks and opportunities, and mainstreaming contributes to international efforts on climate finance mobilization, tracking and transparency.

Remain a forerunner in the climate change response actions: Ethiopia has shown its commitment to reduce a GHG emission level and greening the economy well-ahead of most developing countries through developing policy and institutional arrangements and investing on climate response programmes from the internal public source. This commitment has also helped country to generate increasing climate finance access from the international sources. Explore further opportunities and innovative programming towards development of green bonds, scaling up evidence-based effective interventions and facilitating private finance enabling approaches and business models for climate resilience building.

Annexes:

Annex 1: Key Polices/programs in the agriculture and forestry sector that highly integrate climate change responses
Annex 2: Multilateral, Bilateral and Private Sector financing institutions supporting the climate change projects in LDCs
Annex 3: Ethiopia's Access, Utilization and Spending on Climate Change Responses
Annex 4**:** GEF funded projects in Ethiopia since 1993 for national projects and 2011 for regional/global projects
Annex 5: Ongoing projects financed by AfDB through Loan and Grant window
Annex 6: Projected public finance based on pledges as of September 2016 and comparison with 2013-2014
Annex 7: Projected climate finance towards the 2°C target for the 2021-2030 climate investment
Annex 8: Guidance for Project Proposal Writing
Annex 9: Resource Pack/Toolkits and Hyperlinks to the International Climate Finance Sources
Annex 10: A Step by Step Guide and Training Materials on Project Proposal Writing and Project Management

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