Landscape of Climate Finance in Ethiopia

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CLIMATE POLICY INITIATIVE

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ABOUT CLIMATE POLICY INITIATIVE

CPI is an analysis and advisory organization with deep expertise in finance and policy. Our mission is to help governments, businesses, and financial institutions drive economic growth while addressing climate change. CPI has six offices around the world in Brazil, India, Indonesia, the United Kingdom, and the United States

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EXECUTIVE SUMMARY

Being Africa's sixth largest and fastest growing economy, Ethiopia has shown a strong commitment to being a middle-income country by 2025. Since the launch of the Climate Resilient and Green Economy (CRGE) strategy in 2011, it has established a rich policy landscape coupling economic growth with climate change action. Ethiopia's ambitious climate targets are focused on ensuring low-carbon energy development, conservation of its vast forest reserves, and practicing climate smart agriculture, while mainstreaming adaptation and resilience as a key priority.

This report provides a deep dive analysis of the landscape of climate finance in Ethiopia in 2019/2020. Following an overview of climate relevant strategies and plans in the country to date along with financing needs (Section 1), it provides an in-depth analysis of climate finance flows in Ethiopia mapped across its value chain i.e. from sources, financial instruments, and their end uses and sectors (Section 2). The analysis is based on the methodology and database developed by CPI for the Landscape of Climate Finance in Africa (CPI, 2022). While data gaps, especially on the domestic budget expenditure and private investments limits a comprehensive assessment, the aim of the study is to inform and facilitate discussions among policymakers and public and private financiers, identifying gaps and opportunities for scaling climate finance in Ethiopia.

KEY FINDINGS

- **In 2019/20, an average of USD 1.7 billion per year of investments were committed towards climate change related activities. This is only 7% of Ethiopia's estimated climate finance needs (USD 25.3 billion) and less than 2% of Ethiopia's GDP in 2019/20.**
- Ethiopia attracted more climate finance for adaptation (56%) than mitigation (38%) projects - a stark contrast with the global average (7% and 90%, respectively).
- Heavy reliance on grant and concessional financing for mitigation projects reflects high investment risks, actual and perceived, and raises a concern for long-term sustainable flow of investments. This is not in line with the overall trends observed for Africa where loans were the preferred instruments for climate finance (CPI, 2022)
- The current landscape of climate finance in Ethiopia is dominated by international public financiers (92%), as private finance from domestic and international investors lags (8%). The majority of public climate financing is channelized through grants (70%).
- Agriculture, forestry and other land use (AFOLU) is the highest contributor to GHG emissions in Ethiopia (83%) and received the majority of climate finance (29%, USD 486 million) in 2019/20, though nowhere near its proportion of emissions.

Based on data analysis, desk research and stakeholder interviews, the following recommendations are proposed (Section 3 and Section 4), which can help Ethiopia mobilize climate finance and improve the quality and quantity of climate finance tracking.

1. **The Ministry of Finance and the CRGE Facility** can build a one-stop-shop for a publicly accessible and comprehensive knowledge management system that not only tracks climate relevant domestic public expenditure but also investments from other public and private financial actors. This can help identify entry points for the efficient use of public resources and bringing transparency in investment decision making.
2. **Development Financial Institutions** can implement blended financial instruments for de-risking climate investments and promote public private partnerships to engage more with the private sector.
3. **The National Bank of Ethiopia** can enable the policy and regulatory environment for accelerating private investments for green economy through developing capital markets, addressing foreign currency shortages, creating a favorable collateral policy for small-holder farmers and small and medium size enterprises (SMEs), attractive lending terms to microfinance institutions and deepening mobile banking services
4. **Development partners and the Ministry of Finance** can support in building long-term technical and financial capacity with sub-national and non-state actors for the effective implementation of climate action plans on the ground, which will support with accessing more international climate finance. This can help Ethiopia build a more holistic and long-term strategy for climate finance.

CONTENTS

1. INTRODUCTION

1.1 CONTEXT

Ethiopia is one of the fastest growing economies in the world with an average growth of 9.5% per annum in the past 15 years (World Bank, 2022). This consistent high economic growth had positive effect on poverty reduction and infrastructure development. The share of the population living below the poverty line decreased from 30% in 2011 to 24% in 2016 with an improvement in human development indicators (World Bank, 2020). Through a Growth and Transformation Plan (GTP) II for 2015-2020 and the 10 Year Development Plan (TYDP) for 2021-2030, Ethiopia aims to reach a middle-income country status by 2025. However, the recent Ukraine-Russia war, COVID-19 pandemic, and the civil war in north Ethiopia are creating substantial negative impacts on human life, livelihood, and infrastructure In the country.

Even though it has one of the lowest shares of GHG emissions in the world (0.04% in 2019), Ethiopia is highly vulnerable to the impacts of climate change. Droughts and desertification are the most destructive climate-related natural hazards in Ethiopia with increasing intensity, frequency, and impacts. Climate models suggest that the country will experience 1.5 - 3^0 warming by 2050 (World Bank, 2021)). In 2022, the country witnessed its worst drought in the last forty years severely affecting 7 million people in southern and eastern Ethiopia. With more than 75% of the workforce dependent on rainfed agriculture, it is estimated that drought-induced impacts on agricultural productivity will reduce Ethiopia's GDP by up to 10% by 2045 (USAID, 2016).

Ethiopia has a huge potential to build a low-carbon development pathway considering its vast forestry resources and immense potential for renewable energy generation through solar, hydro, wind, and geothermal energy (IRENA, 2022). Figure 1 shows that climate investment needs and flows in Ethiopia (discussed in Section 2) are minimal when compared to the costs of inaction as well as the potential socio-economic and development benefits that climate change investments can yield.

Ethiopia is one of the countries least responsible for global climate change and most vulnerable to its impacts and has one of the most ambitious NDCs in Africa.

Figure 1: Climate finance costs, needs and flows, losses, and benefit of climate action in Ethiopia

NDC and NAP implementation costs

Mitigation: USD 27.6 bn/yr
Adaptation: USD 4-6 bn/yr

International climate finance need:
USD 25.3 bn/yr

To be raised domestically:
USD 6.3 bn/yr

Tracked Climate Finance, 2019/2020

USD 1.7 bn

LOSSES (ECONOMIC AND HUMAN)

Up to 10% loss of GDP by 2045 due to climate-induced decrease in agricultural productivity (USAID, 2016)

More than 415,000 deaths due to natural hazards in the last century (EM-DAT 2020)

BENEFITS OF ACTION

Implementation of adaptation strategies by 2030 in AFOLU to result in:

- Number of insured farmers to increase by 30%
- 5 mn green jobs created
- 1.5 mn communities benefitting
- USD 221 mn in export earnings from sustainable forestry products
- 9 mn hectares of forests restored

Implementation of energy policy to result in:

- 100% of households using renewable energy
- 35% of households having stable access to energy

Note: *This external financial support, required beyond domestic public sources, to fund the "costs of implementation of NDCs" are defined as "climate finance needs" We compiled these estimates from different reports; they may not be directly comparable to each other in terms of scope and sector coverage*

Table 1: Country Profile

Population (NBE, 2021)	Estimated: 102 million
	Annual growth rate: 6.3%
GDP (WB, 2021b)	USD 111.3 billion
Credit Rating (Reuters, 2021)	CCC
Energy Access (Tracking SDG 7)	52% of population lack access to electricity
	93% of population lack access to clean cooking fuels
Access to Safe Water (WHO, 2019)	41.5% of population has access to safe water
Total GHG emissions split by sector (FDRE, 2020)	Energy: 5%
	AFOLU: 83%
	Waste: 3%
	Industrial Processes and Product Use: 2%
Key Climate Risks	Increased aridity, droughts, water shortage
	Food security
	Intense rainfall and flooding
	Land degradation and soil erosion
	Loss of biodiversity and ecosystem
Governance	No. of regions: 12
	No. of administrative zones: 68
	Local Government Areas (LGAs): 774

1.2 CLIMATE CHANGE POLICIES, STRATEGIES, AND PLANS IN ETHIOPIA

Ethiopia has progressed significantly in establishing policies, plans, and institutional frameworks to mainstream climate change into development planning at the national and sub-national level.

Ethiopia endorsed the Climate Resilient Green Economy strategy (CRGE) in 2011, the first national climate policy document. Under the strategy, Ethiopia aimed to achieve middle income status by 2025 while building a green economy. The CRGE strategy is incorporated in Ethiopia's TYDP for 2021-2030 and is based on four strategic pillars:

1. Improving crop and livestock production practices for higher food security and farmer income while reducing emissions.
2. Protecting and re-establishing forests for their economic and ecosystem services, including as carbon stocks.
3. Expanding electricity generation from renewable sources of energy for domestic and regional markets to achieve universal energy access.
4. Using modern and energy-efficient technologies in transport, industrial sectors, and buildings.

The CRGE Facility, Ethiopia's national climate change fund, is key to mobilizing climate finance for implementing the CRGE strategy and the NDC. The goal of CRGE Facility is to mobilize, access, and combine finances required for implementing the CRGE from international, public, and private sources and channel them to sectoral ministries for implementation. It is jointly managed by the Ministry of Finance and the Environment Forest and Climate Change Commission (EFCCC) responsible for budgeting and technical aspects respectively (FDRE, 2013).

Under its updated NDC, Ethiopia proposed a more ambitious emissions reduction target of 68.8% compared to its first NDC target of 64% reduction compared to BAU projections by 2030. Twenty percent of this ambition will be implemented unconditionally while 80% is conditional on international support. Ethiopia also expressed strong desire to participate in carbon market opportunities and acknowledged them as important financing instrument to align with the Paris Agreement.

Ethiopia aspires to bolster strong adaptation capacity through national level planning. After the submission of first NDC in 2015, Ethiopia created its first National Adaptation Plan (NAP-ETH) in 2017, which had 18 adaptation options across different sectors. To understand 'how' to implement these options, the NAP Implementation Roadmap was developed to categorize the options into short term priorities for the 2020-2022 period (research, capacity building) and long-term priorities for 2025-2030. Forty out of the total 52 actions identified in NAP and the implementation roadmaps were prioritized in the updated NDC submission in 2021 with a detailed analysis of baseline and quantified targets for 2030. It covers sectors such as agriculture, forestry, water transport, urban, health, land use, and natural resource management. Ethiopia has also developed a NAP resource mobilization strategy in 2020 to secure resources for adaptation through domestic budgeting, international climate financing, and the private sector. However, it is not available in the public domain. The NAP implementation plan states that doing a funding gap analysis, identifying new and innovative funding resources, and engaging with the private sector are key strategic priorities for implementing effective and sustainable funding mechanisms.

The Government of Ethiopia is committed to the implementation of the UNFCCC Gender Action Plan, agreed in 2017, for gender-responsive climate action. Ethiopia has a history of progressive laws and policies on gender equality, such as the National Policy on Women (1993) and National Action Plan for Gender Equality (NAP-GE) of 2006-2010. Since 2017, Ethiopia has made concerted efforts to mainstream gender issues in climate change programing by creating gender directorates at various ministries and CRGE units. Training was provided to middle level managers and practitioners from regions and federal sector institutions. The CRGE mainstreaming guidelines and checklists also included gender considerations (UNFCCC, 2019). Despite the efforts, a recent gender audit of the CRGE facility programs reveals that integration exists in planning but lacks implementation on the ground (CDKN, 2020). The planning lags in its multi-sectoral approach and fails to bring coordination between the gender directorates of other relevant ministries like ministry of agriculture. There is limited knowledge and awareness on gender policies and action plans among the implementors of climate projects at local government level (ACT Alliance, 2022)

1.3 FINANCING ETHIOPIA'S NDCS

According to Ethiopia's NDC, it requires USD 316 billion (mitigation 87% and adaptation- 13%) by 2030 to implement its NDC. Out of this, 20% will be mobilized domestically and 80% will be needed from international sources.

Mitigation Costs: The updated NDC estimates that USD 275.5 billion are required to implement the mitigation targets in Ethiopia between 2020-2030. Out of the total USD 275.5 billion, USD 80 billion will be required in CAPEX to finance the CRGE's four pillars (mentioned in Section 1.2). These CAPEX needs are split across priority sectors like the improvement of power generation and transmission infrastructure (48%), sustainable transportation (29%), forestry (12%), agriculture (5%, 2% for soil and 3% for livestock), and efficient cement industry (6%). Some of these investments, especially for energy systems, can be considered business-as-usual or part of the conventional development pathway. According to Coalition for Urban Transitions report, USD 42 billion in incremental investments is required annually by 2050 to deliver low-carbon urban interventions, a significant level of investment when compared to the needs stated in the NDC (Coalition for Urban Transitions, 2021). These urban investments are expected to deliver benefits worth USD 240 billion - equivalent to 250% of the annual GDP in Ethiopia. [1]

Adaptation Costs: NDC estimates that USD 40.5 billion are required to implement the adaptation targets in Ethiopia between 2020-2030 for the 40 prioritized adaptation options. However, these needs are likely to be an underestimation requiring more detailed investment planning and estimation. For instance, Ethiopia's National Adaptation Plan (NAP-ETH) indicated USD 90 billion (or USD 6 billion per annum) is needed between 2016-2030 to implement the NAP. These estimations are based on proposed implementation of the 18 adaptation options/programs outlined in the NAP, inputs from sectoral adaptation costs and budgets for disaster risk management and SDG implementation.

1 These benefits include energy savings and other avoided costs, such as reduced vehicle costs and lower material costs for construction, with wider economic benefits such as job and gross value added creation.

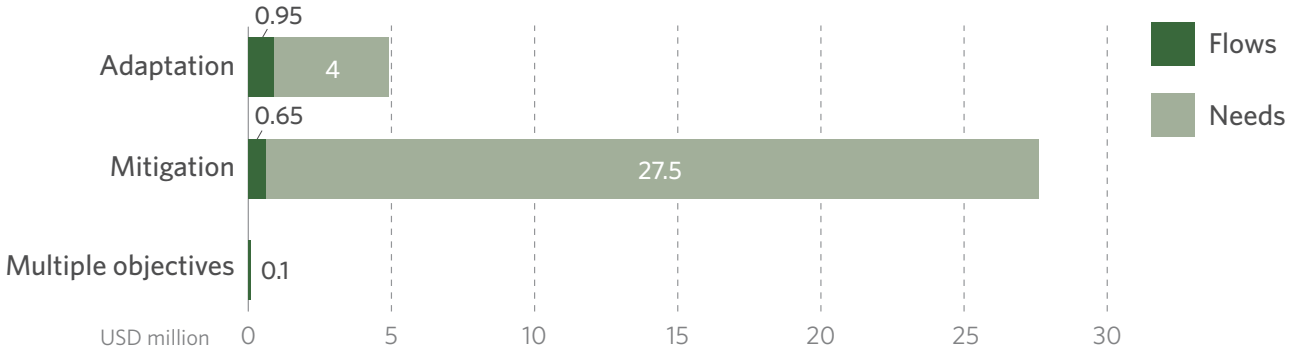
2. LANDSCAPE OF CLIMATE FINANCE IN ETHIOPIA

This section dives into the landscape of climate finance in Ethiopia for 2019 and 2020, reported as annual averages. It provides a comprehensive overview of climate financing flows and builds upon the robust definitions and analytical approach of the Landscape of Climate Finance in Africa (CPI, 2022). Section 2.1 discusses some of the overall findings, followed by a more detailed discussion of sources of finance (Section 2.2) and their preferred end use sectors and instruments to channel the investments (Section 2.3).

2.1 OVERALL CLIMATE FINANCE

Tracked climate finance (USD 1.7 billion) in Ethiopia is only 7% of its estimated needs (USD 25.2[2] billion) and less than 2% of its GDP[3] in 2019/2020.

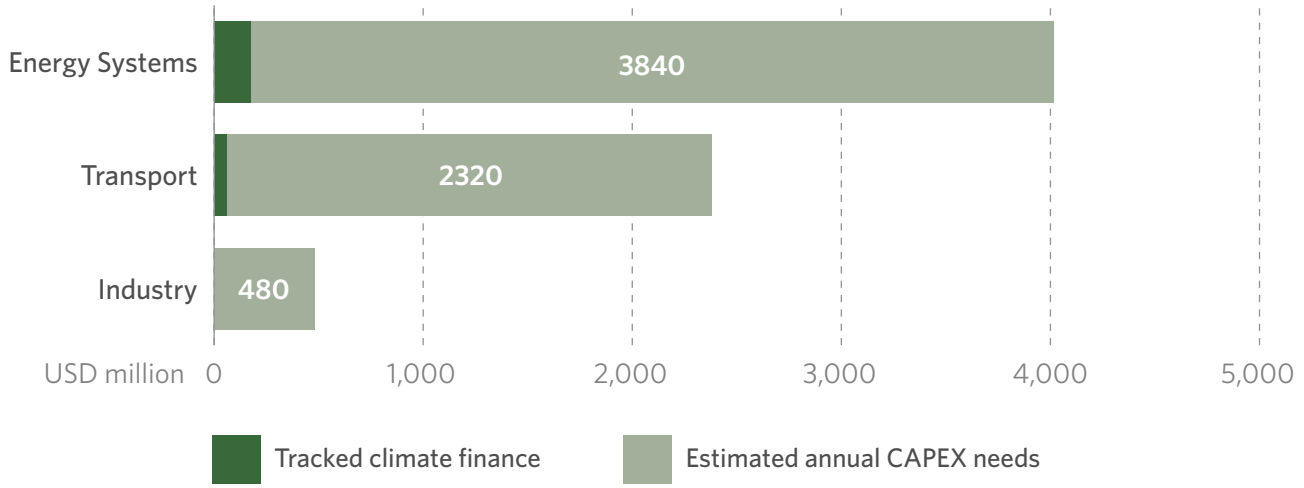
Figure 2: Overview of tracked climate finance in Ethiopia (2019/2020, USD billion)



1. **Ethiopia attracted more climate finance for adaptation (56%) than mitigation (38%) projects - a stark contrast with the global average (7% and 90% respectively) - but still falls short of the required need (Figure 2)**. At USD 944 million, adaptation finance committed to Ethiopia accounted for the majority of the tracked total (56%). This is in line with country's high vulnerability to climate change and its priority to build a climate resilient economy while mainstreaming adaptation planning across sectors. However, it still lags behind the required adaptation costs of USD 4-6 billion per annum as identified by the NDC.

2 In conditional financing
3 USD 107.5 billion of GDP

Figure 3: Investment gap for priority mitigation sectors

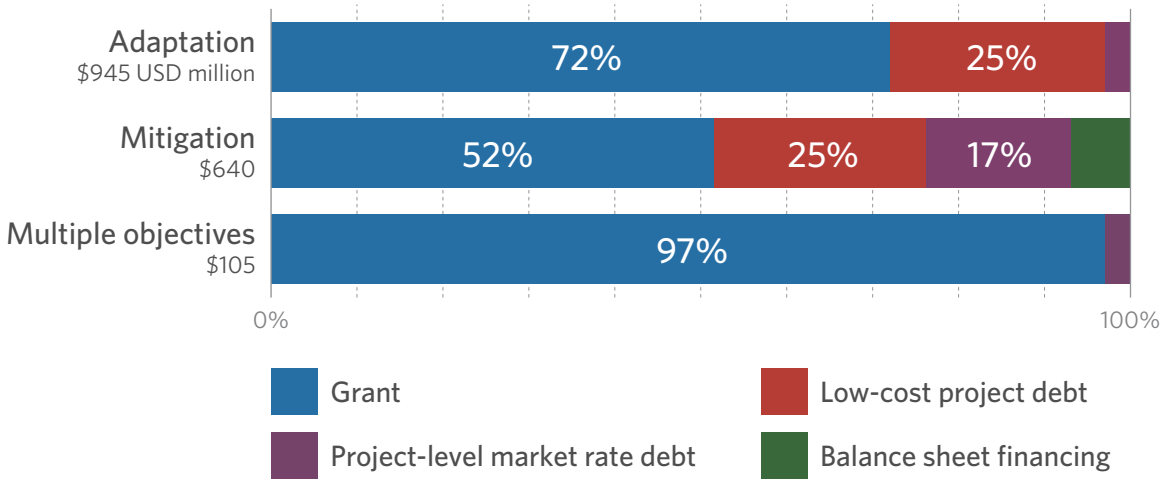


2. **If Ethiopia is to achieve its ambitious mitigation goals, it must scale its mitigation finance substantially**. The updated NDC estimates that USD 275.5 billion is required to implement the mitigation targets in Ethiopia between 2020- 2030. However, the sectoral split of the mitigation needs is not available, except for CAPEX needs for some mitigation interventions outlined in section 1.3. Considering those needs of USD 80 billion in CAPEX for mitigation needs by 2030 (USD 8 billion per annum), the current mitigation finance of USD 639 million is very low and needs to be scale up. The largest sectoral climate investment gap, especially for CAPEX needs, exists in energy systems (Figure 3).
3. **The AFOLU sector received most of the climate finance in any single sector (29%, USD 486[4] million), though nowhere near its proportion of emissions.** Other & cross-sectoral financing flows accounted for the highest portion of Ethiopia's climate finance, roughly 35% (USD 586 million), followed by water and waste water, (16%, USD 275 million), energy systems (10%, USD 180 million), transport (6%, USD 105 million), and buildings and infrastructure (3.5%, USD 58 million) as the other major recipients by sector.
4. **Climate finance in Ethiopia is dominated by international public financiers (92%) as private finance trails (8%).** Multilateral DFIs and bilateral development partners together provide 70% of the tracked finance. Even though efforts are being made for tagging domestic budget expenditure in Ethiopia, limited information is publicly available on domestic government's expenditure on climate relevant activities at the regional and woreda (district) level (See Box 1). Considering the government's plans for economic reforms and expanding the economy, Ethiopia presents huge opportunity for private climate finance but currently lags far behind.
5. **Heavy reliance on grant and concessional financing for mitigation projects reflects high actual and perceived investment risks, raising a concern for long-term sustainable flow of investments.** Half of the mitigation finance was channeled via grants while the other half was equally split as concessional and non-concessional debt. Balance sheet financing and project level equity played a negligible role, together accounting for less than 3% of tracked finance (Figure 4). The majority of adaptation and dual benefits projects were

4 Split between mitigation (59%), adaptation (34%) and dual benefits (7%).

funded through grants, 72% and 97% respectively. This is not in line with the overall trends observed for Africa, where loans (56%) were the preferred instruments for climate finance, followed by grants (30%) (CPI, 2022).

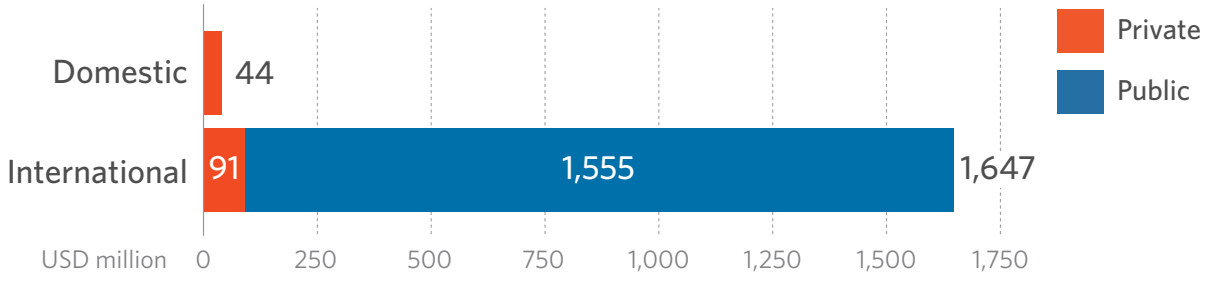
Figure 4: Climate finance breakdown by use and instruments (2019/2020, USD million)



2.2 SOURCES

Ninety-two percent of the tracked climate finance in Ethiopia came from public sources while private climate finance lags at 8%. As shown in Figure 5, all of the tracked public finance tracked is from international actors, due to the data limitations on the domestic public expenditure side. About a third of private climate finance came from international private financiers.

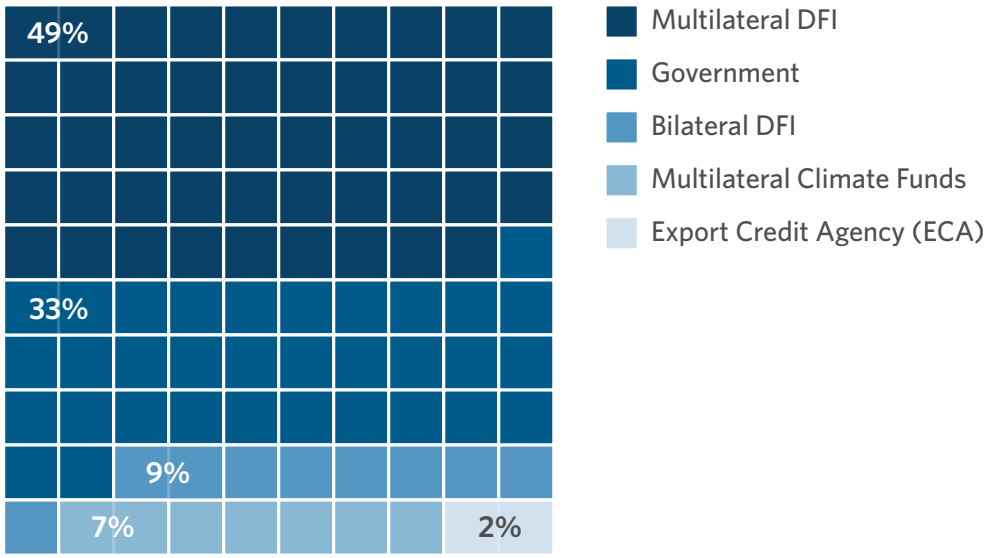
Figure 5: Breakdown total climate finance by sources (2019/2020, USD million)



2.2.1 INTERNATIONAL PUBLIC FINANCE

International public climate finance in Ethiopia was primarily committed by multilateral DFIs (49.5%, USD 770 million) and bilateral governments (33%, USD 511 million), the majority of which was channelized as grants (70%). As shown in Figure 6, other key sources were bilateral DFIs (9%, USD 140 million), multilateral climate funds (6.7%, USD 103 million) and export credit agencies (1.8%, 32 million). Sixty percent of the international public climate finance was used for adaptation projects, 34% went towards mitigation, while the remaining 7% climate financing had dual benefits.

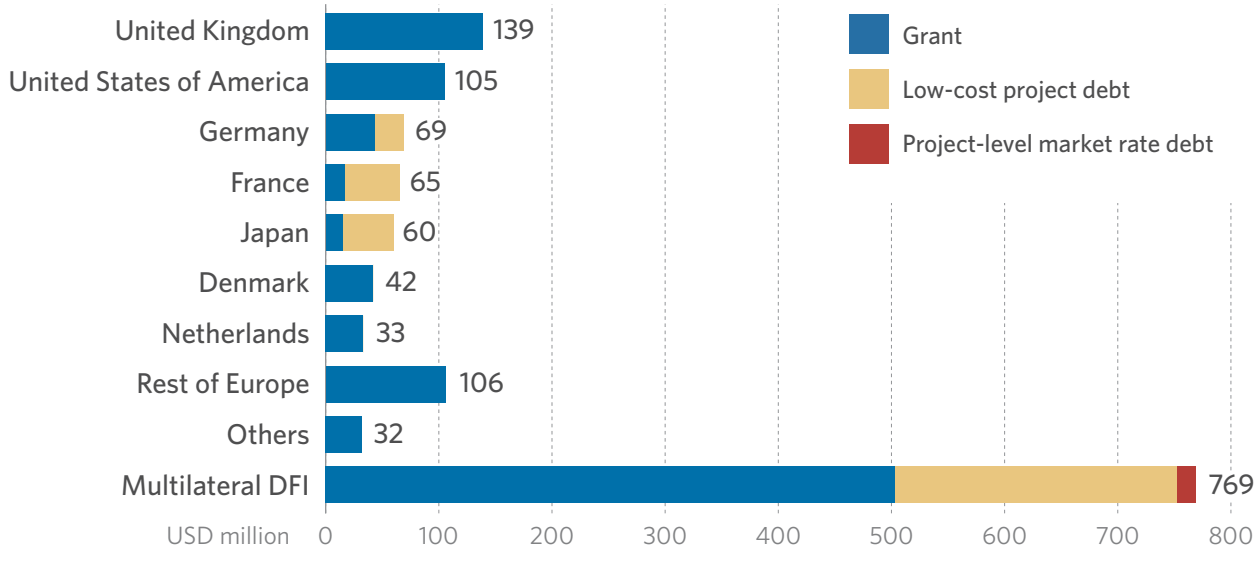
Figure 6: Breakdown of international public climate finance by actors



International public climate finance in Ethiopia was primarily channelled through grants (70%), with limited use of debt at the concessional (25%) and commercial rate (5%), and no equity financing. More than 62% of mitigation projects used grants for financing in water and wastewater (25%), agriculture (25%) and energy sectors (15%). Considering the advanced level of knowledge globally on the risk-return profile of mitigation projects, more debt, balance sheet, or project-level equity financing instruments can be deployed in Ethiopia, which are more commonly used in countries like Nigeria for mitigation projects.

Bilateral climate finance in Ethiopia mostly came from five countries, the UK, USA, Germany, France, and Japan, which all provided more than 60% of bilateral climate finance in 2019/2020. As shown in Figure 7, the majority of finance was provided as grants from the UK, USA, and Germany; France and Germany channelized their funds, mainly as concessional loans.

Figure 7: Providers of international public climate finance, by instrument (USD million)



Ethiopia is the second largest recipient of foreign direct investments (FDI) in Africa, receiving USD 2.5 billion on average in 2019 and 2020 (World Bank, 2021c). China is known to be a large provider of FDI in Ethiopia, providing roughly 60% of total FDI in 2019/2020, followed by Saudi Arabia, the U.S., India, and Turkey (U.S. Department of State, 2022). However, it's difficult to assess the climate relevance of public and private investments from these countries to Ethiopia given the lack of publicly available data. If this data were available, the share of climate investments from these countries would likely be substantially higher.

Multilateral Climate Funds (MCFs) such as the Green Climate Fund, Green Environment Facility, and the Least Developed Countries Fund financed 6% of the tracked projects (USD 103 million). Fifty-one percent of the financing from MCFs was channeled as commercial loans with the remaining 49% being provided in the form of grants. More than 90% went towards to the AFOLU sector, for both mitigation (55%) and adaptation (45%)strategies. Among all of the international public financiers providing climate finance in Ethiopia, only MCFs provided more financing for mitigation than adaptation.

There is limited information publicly available on domestic climate budget expenditure in Ethiopia. There is also no official nor publicly available record or database which currently tracks financing from international NGOs, philanthropies, multilateral or bilateral development partners and the private sector (UNFCCC, 2020). Box 1 summarizes the various reports providing estimates for climate-relevant government expenditure in Ethiopia.

Box 1: Estimates for climate-relevant government expenditure in Ethiopia

While no periodic climate-relevant budget expenditure is publicly available, some one-off reports provide a few estimates for Ethiopia. Ethiopia's submission to the UNFCCC Standing Committee on Finance for the determination of climate finance needs mentions that the Government of Ethiopia has mobilized over USD 22.1 billion from 2011-2019 from domestic, bilateral, and multilateral sources as well as from international climate finance institutions in climate finance across sectors. However, a detailed study is not available in the public domain (UNFCCC, 2020). The government of Ethiopia is in the process of developing a climate-related expenditure tagging and tracking system which is due to pilot in 2022.

A 2020 progress report on the CRGE implementation by the NDC Partnership uses Ethiopia's Climate Finance Tracking and Projection Approach and Methodology (MoFEC, 2017) for estimating Ethiopia's climate spending. It suggests that an annual average of USD 8.2 billion has been spent by the Government of Ethiopia from 2011 to 2019 through 224 projects that have a direct or indirect link to the CRGE objectives (NDC Partnership, 2020). It states that USD 6.8 billion more is required per year between 2020 to 2030 to meet the CRGE mitigation targets. The vast majority of finance spent on these identified climate change-related projects during the study period came from Ethiopian public funds, with the second largest source being international aid, while private sector finance playing almost no role. However, the study acknowledges that this might be an overestimation in the absence of a methodology to tag and identify climate relevant expenditure within the total cost of the projects, suggesting a strong need for climate budget tagging and tracking system.

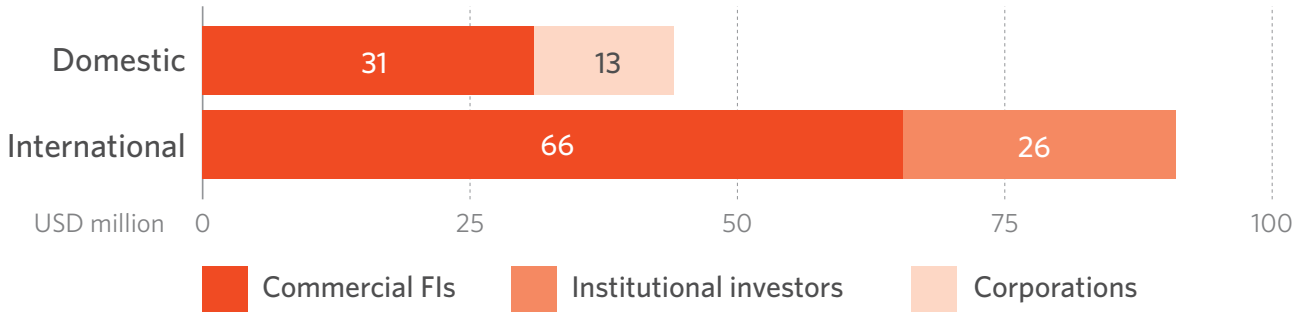
Another analysis by the Overseas Development Institute from 2014 for the period between 2008-2012 estimated that government expenditure on climate-relevant activities was the largest source (80%) of tracked climate finance in Ethiopia, and represented roughly 15% of total government expenditure, 1.8% of its GDP (ODI, 2014). However, the study is not updated to include the latest trends.

In 2022, a detailed risk sensitive budget review (RSBR) for Ethiopia was carried out by United Nations Office for Disaster Risk Reduction (UNDRR)Africa. It indicates that between 2015 and 2020, the Ethiopian Government budgeted on average USD 130.2 million per year for direct and indirect disaster risk management (UNDRR, 2022). This is roughly 2% of its total federal budget. The study recommends institutionalizing a disaster budget tracking and reporting system within the Ministry of Finance of Ethiopia for better planning and implementation of disaster risk reduction and climate adaptation projects.

2.2.2 PRIVATE FINANCE

Domestic and international private investors funded only 8% of the tracked climate financing in Ethiopia in 2019/2020. Commercial financial institutions provide a significant share of private climate finance (USD 97 million) in Ethiopia followed by institutional investors, mainly philanthropies (USD 26 million) and corporates (USD 13 million) as shown in Figure 8. Sixty-seven percent of the tracked private financing was from international sources. Overall, market-rate and balance sheet debt financing were the prominent instruments used by commercial banks at 48% and 23% respectively, followed by grants from international philanthropies (19%), and corporate financing through balance sheet equity (9.5%). Consistent with the global trends, private financiers majorly funded projects in energy systems (83.5%) and AFOLU (14.5%).

Figure 8: Breakdown of private climate finance by actors



The new 'Homegrown Economic Reform Agenda' is laying the foundation for expanding the economy, offering a plethora of climate investments opportunities for the private sector. Considering Ethiopia's plan to be a middle-income country by 2025, high emission intensity sectors in manufacturing, industries, and infrastructure are expected to grow rapidly. Ethiopia historically followed a state-led infrastructure development program which led to high growth but also brought along issues of high levels of foreign debt and inflation. But the new Homegrown Economic Reform Agenda aims to steer private investments in human and economic development in the priority sectors by enhancing financial sector development and developing capital markets as one of the objectives (FDRE, 2020).

Carbon markets in Ethiopia are in a nascent stage, but hold tremendous potential for growth. The UNDP established a voluntary carbon market mechanism for Ethiopia to support urban afforestation activities under its Nationally Appropriate Mitigation Actions (NAMA) initiative (UNDP, 2019). The International Climate Initiative (IKI) of the German Federal Ministry for the Environment is also supporting the Climate Finance Innovators Project which aims to develop replicable climate financing models such as the clean development mechanism (CDM) and NAMA in Ethiopia. The project aims to build comprehensive capacity among carbon market stakeholders and establish innovative linkages between UNFCCC market mechanisms and climate funds like the GCF. Box 2 gives another example of a successful carbon market project in Ethiopia.

Box 2: Coffee and Carbon Credits in Ethiopia

Ethiopia is the birthplace for the world famous Arabica Coffee and is one the largest producer of coffee (CGTN Africa, 2022). Coffee is the backbone of Ethiopia's economy with a quarter of the population dependent on coffee production and exports for livelihood. A recent study showed that climate change will significantly affect the Ethiopian specialty coffee sector due to loss of genetic diversity and production area suitable for cultivating specialty coffee resulting in adverse socio-economic impact (Chemura et al., 2021). Studies also show that coffee forests in the Oromia regions of the southwestern Ethiopia have a carbon sequestration potential of 36.6Mt with an estimated carbon stock value of USD 2.5 billion by the end of 2050 (FEkadu et al.,2021).

In 2017, the World Bank funded the 'Oromia National Regional State Forested Landscape Project' to improve the enabling environment for sustainable forest management and investment in Oromia. It had three components:

i. Enable investments in participatory forestry management (PFM) including livelihoods support and selected nature-based community enterprise development, reforestation and land use planning,

ii. Create enabling environments for effective safeguards management, information, and MRV systems and,

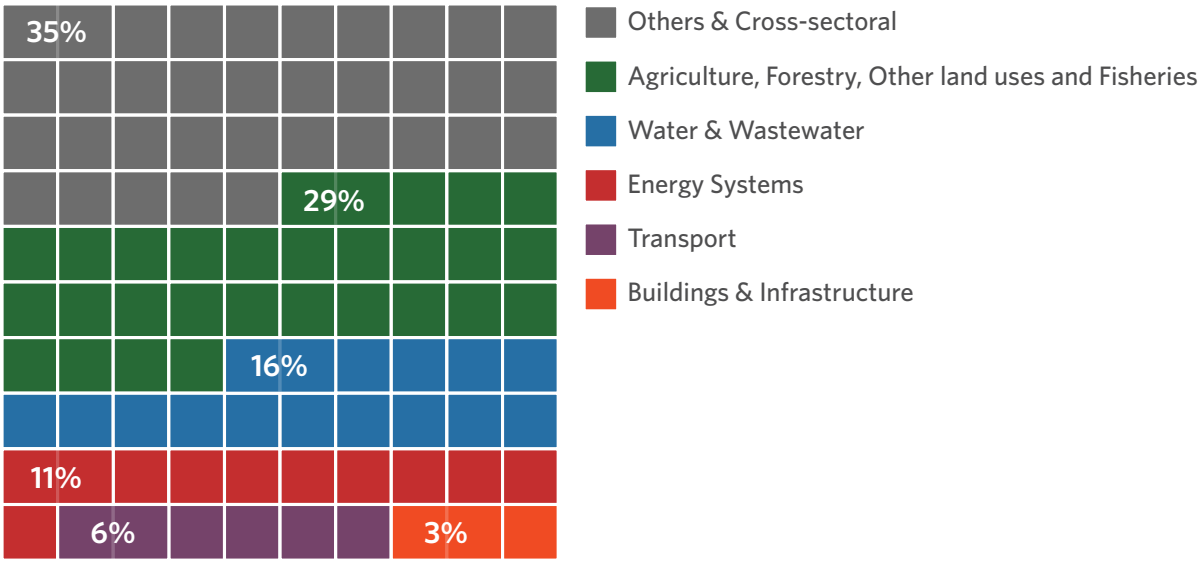
iii. Emission reduction payments of USD 50 million over 10 years through carbon credits (World Bank, 2017).

In 2022, the project implementation has shown remarkable progress. A forest management plan for 123,455 ha of natural forest is prepared through PFM through establishment of 78 legally registered forest communities with 30% women participants. The Emission Reduction Purchase Agreement (ERPA) is expected to be signed in November 2022. The project is one of the key examples of how Ethiopia can leverage carbon markets for its mitigation and adaption priorities while achieving its development goals (World Bank, 2022).

2.3 USES AND SECTORS

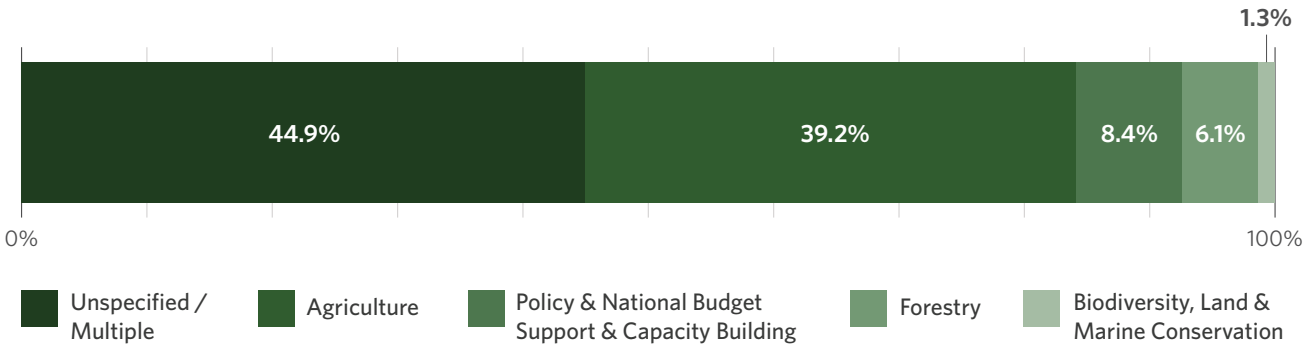
The AFOLU sector received the majority of climate finance in any single sector (29%, USD 486 million) though is nowhere near its proportion of emissions and climate finance needs. Other and cross-sectoral financing flows accounted for the highest portion of Ethiopia's climate finance, roughly 35% (USD 586 million), followed by water and waste water (16%, USD 275 million), energy systems (10%, USD 180 million), transport (6%, USD 105 million), and buildings and infrastructure (3.5%, USD 58 million) as the other major recipients by sector as shown in Figure 9.

Figure 9: Breakdown of climate finance by sectors



2.3.1 AFOLU

Figure 10: AFOLU subsector breakdown



Despite the importance of the AFOLU sector in Ethiopia, the volume of climate finance it received (29%, USD 486 million) is nowhere close to the needs. AFOLU is the highest contributor of GHG emissions in Ethiopia (83%). Ethiopian agriculture contributes to about 44% of the country's GDP, about 70% of the export earnings, and approximately 80% of all employment. Of the USD 486 million that went towards the AFOLU sector, 60% had adaptation benefits, followed by mitigation (32%), and dual benefits (8%). Though it was not possible to tag about 44% of the AFOLU projects to any particular sub-sector, about 40% went towards agriculture, 8% towards policy and capacity support, and only 6% to forestry and land use. About 88% of the AFOLU projects were funded through grants and concessional debt. Considering the cross-sectoral nature of agricultural projects it is likely that some of them will be tagged as others or cross-sectoral climate flows.

The forestry and land use (LUCF) sector has the highest mitigation and private investment potential, which remains largely untapped. LUCF received only 6% of the tracked AFOLU climate financing and 1.7% of the total (USD 29 million), despite the Government's ambitious forest restoration and reforestation targets of up to 15 million ha in the long term (EFCCC, 2020). The aim is to turn the sector into a carbon sink through initiatives such as the Forest Sector Development Plan, the Green Legacy Initiative (see Box 3), and clean cooking and REDD + strategies (FDRE, 2020b). A recent study suggests that USD 638 million of private investments in tree plantations in Ethiopia could deliver USD 1.91 billion in return, or USD 3 for every USD 1 invested (EFCCC, 2020).

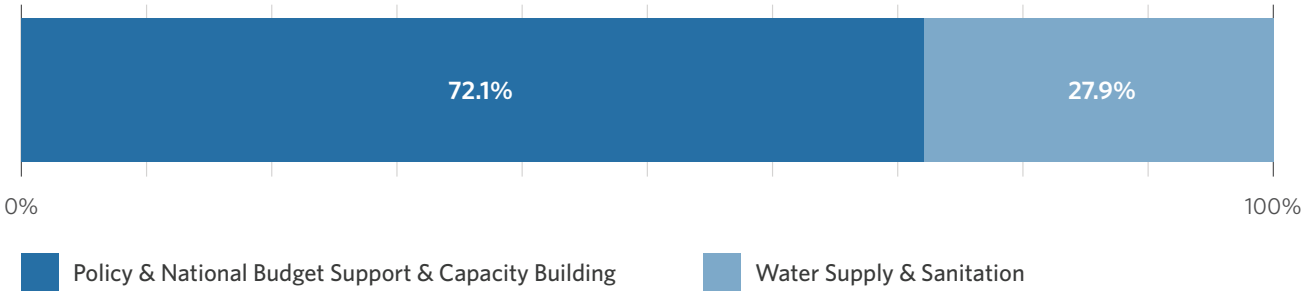
Box 3: Green Legacy Initiative (GLI) of Ethiopia

Ethiopia's forest cover has reduced to about 15% of the country's land in the recent years due to increased agricultural production, urbanization, and livestock grazing. In four years, Ethiopia aims to plant 20 billion trees under its Green Legacy Initiative (GLI) - an initiative of Prime Minister Abiy Ahmed. In 2019, Ethiopia made global news with a world record of planting more than 350 million trees in 12 hours. In 2022, the Ethiopian government claims to have surpassed this challenge (CNN, 2021).

GLI is a good example of how political buy-in can create mass mobilization and collective awareness for sustainable forest management initiatives. The Ministry of Agriculture (MoA), the Ministry of Water, Irrigation and Energy and the Environment (MoWIE), Forest and Climate Change Commission all contributed a combined USD 3.5 million for GLI. These federal ministries are using their own technocratic capacities for implementing, coordinating, and leveraging the Ministry of Innovation and Technology (MoIT) in data management capacity. This is in stark contrast with some of the other large scale green initiatives in Ethiopia, like the Sustainable Land Management Project and REDD+, where project design, implementation, and monitoring have strong influences from donors and external stakeholders. However, the full impact of the initiative in terms of creating long-term capacity and institutional mechanisms is yet to be seen (Fikreyesus et al., 2022).

2.3.2 WATER AND WASTEWATER

Figure 11: Water and wastewater subsector breakdown

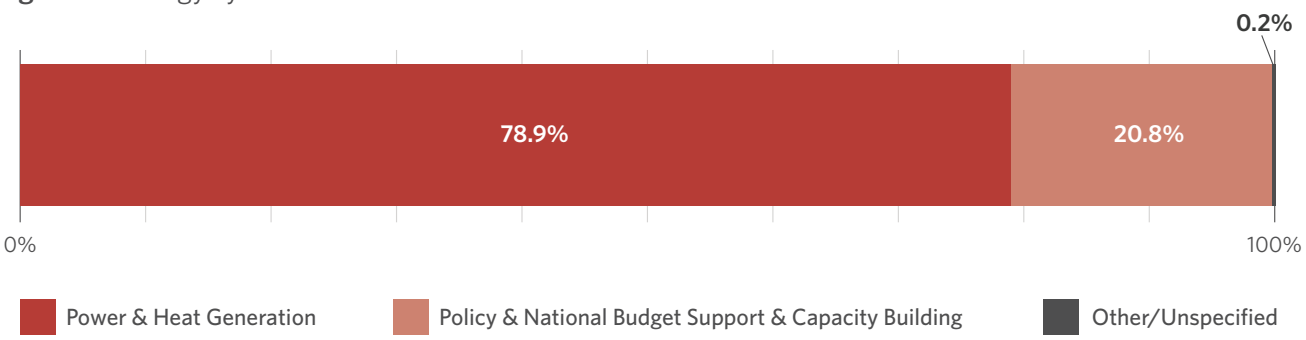


The water and wastewater sector is the second largest recipient of climate finance (USD 275 million). The majority of this amount was allocated to adaptation projects (60%), followed by mitigation (33%), and then projects with dual benefits (7%). All of the water and waste water projects were funded through grants (85%) and concessional debt (15%).

The conventional nexus approach on water-food-energy needs to be rooted in the social and political complexities in Ethiopia. Ethiopia has some of the richest water resources in Africa and is heavily reliant on hydropower for energy. While there are several economic and social benefits of large hydropower dams in Ethiopia tackling water and energy security, irrigation and water storage, it is equally important to reclaim degraded areas around the water reservoirs through afforestation and reforestation programs. Also, these programs need to better understand the complexities of inequality, politics and power play in access to water in Ethiopia. (Müller-Mahn et al, 2022). The Government of Ethiopia has recognized the need to sustainably and equitably manage the water access through nature-based solutions. For instance, the Ministry of Water, Irrigation and Energy and the Environment (MoWIE) has initiated a USD 3.6 million program in partnership with United Nations Economic Commission for Africa (UNECA) for building resilience of water resources infrastructure and local community in Ethiopia (UNECA, 2020).

2.3.3 ENERGY SYSTEMS

Figure 12: Energy systems subsector breakdown



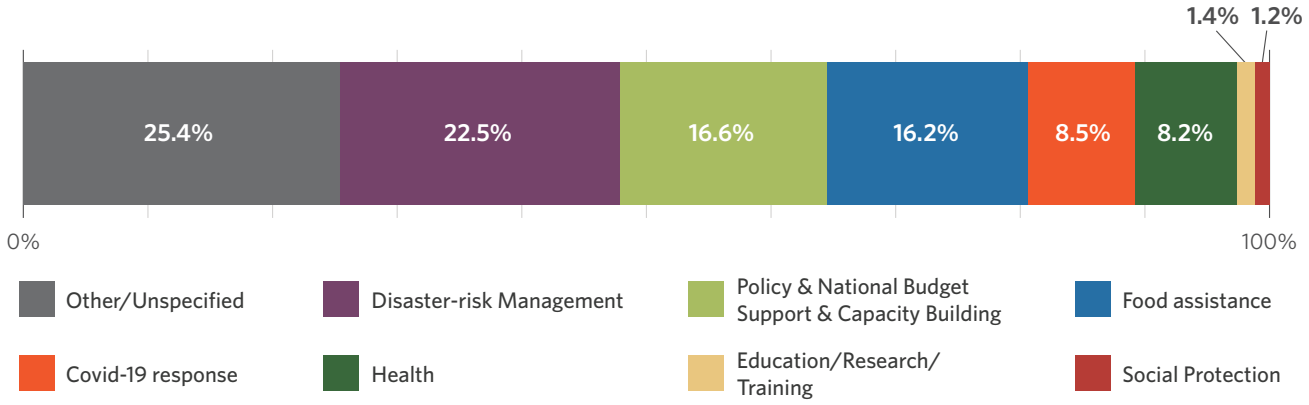
Finance for energy system needs to increase by at least 20 times to meet the capital requirements of the sector. Energy systems recieved around 10% of the climate finance in Ethiopia (USD 180 million), out of which 63% of the energy projects were funded by private investments. This falls short of the USD 3.8 billion required annually until 2030 in CAPEX alone for renewables-based power generation and transmission infrastructure (UNFCCC, 2020). Among all the sectors, only energy sectors uses a variety of financial instruments to channel financing. Roughly 62% are funded through different types of debt such as concessional debt (9%), non-concessional project debt (36%), balance sheet debt (17%), balance sheet equity (7%), and grants (30%). More than 50% of the tracked renewable energy financing went towards wind energy generation alone, with very little targetting off-grid renewable energy solutions (3%).

With more that 55% of Ethiopia's population without access to electricity, the energy sector opportunities remains largely untapped. The energy sector accounts for only 5% of the GHG emissions but are expected to increase by a larger proportion than other sectors (FDRE, 2020b). In fact, Ethiopia has a strong ambition to reduce the energy emissions by 50%, or 25% under the conditional and unconditional mitigation pathways. Only 45% of Ethiopia's population currently has access to electricity and 90% of its households currently use traditional biomass for primary energy. National Electrification Program (2017) aims to achieve universal electrification in 2025 (35% - off-grid, 65% - grid) which will require USD 5.7 billion and public expenditure of USD 1.5 billion (FDRE, 2019). Clean Development Mechanism (CDM) projects have mobilized the private sector in Ethiopia by promoting sustainable energy access through projects such as Ethiopia Off-Grid Renewable Energy Programme (EOG-PoA), as well as the Ethiopia – Clean Cooking Energy Programme managed by the Development Bank of Ethiopia (DBE, 2017b).

The Ethiopia energy landscape is heavily dominated by large scale, state-run hydropower plants and is likely to remain as such. The Ethiopian Government's plans to increase capacity to 13.5 GW by 2040 would make Ethiopia the second-largest hydro producer in Africa (IEA, 2019). Three dams are key to meeting these goals, namely Grand Ethiopian Renaissance Dam (GERD) as well as the Gilgel Gibe III and the Gilgel Gibe IV dams, with an estimated total capacity of 9.4 GW. Significant environmental concerns and geo-political disagreements with neighboring Sudan and Egypt are causing delays in the completion of the GERD. The dam has an estimated cost of USD 4.6 billion and has strong backing from chinese infrastructure investors and developers (Piliero, 2021). However, we do not include large hydro projects financed by the public or private sector as climate finance if clear information on the mitigation potential of the projects is not available (CPI, 2022b).

2.3.4 OTHER & CROSS-SECTORAL

Figure 13: Breakdown of other & cross sectoral finance



Other and cross-sectoral financing flows accounted for the highest portion of Ethiopia's climate finance, roughly 35% (USD 586 million). A large share of which was earmarked for policy and capacity support (17%), food security (17%), health (8%), COVID-19 response (8.5%), and other disaster risk management practices (22%). Given the cross-cutting nature of projects, especially those which build adaptive capacity in vulnerable populations, the majority of climate projects funded in Ethiopia could not be tagged to a particular sector.

Issues of climate change, poverty, natural and man-made disasters are highly connected in low-income countries like Ethiopia. USD 100 million in climate finance was channeled through the Ethiopia COVID-19 Crisis Response Budget Support (ECRBS) by the AfDB which was aligned with the Government's COVID-19 National Emergency Response Plan (NERP) which aimed to address the health, social, and economic impacts of the pandemic. The program had a multi-sectoral approach cutting across agriculture, education, shelter and non-food items, food, health, nutrition, protection, site management, water and sanitation, refugees coordination, and management.

3. KEY BARRIERS AND CHALLENGES

While Ethiopia has progressed well in creating an enabling policy and regulatory environment, critical barriers still exist in mobilizing private and public climate finance. The challenges listed below were primarily identified via desk research and interviews conducted during the study.

POLICY AND REGULATORY BARRIERS

1. **A highly regulated financial sector** - The financial sector is strictly controlled by the financial regulator, the National Bank of Ethiopia (NBE), allowing limited to no access to foreign banks and investors. Ethiopia is ranked the lowest on the Absa Africa Financial Markets Index of 2021, an index that evaluates financial market development in 23 Africa countries. It is ranked one of the lowest in its ability to attract investors, ease of market entry, and information transparency. In fact, Ethiopia is the largest economy in Africa without a stock market (OMFIF, 2021).

   The NBE has exercised strict regulation on foreign exhange as Ethiopian's currency, Birr, cannot freely covert to dollars and is overvalued (BERF, 2018). However, due to high borrowing by public banks to maintain the high economic growth, the country is facing foreign exchange shortage. The lack of access to foreign currency and loans is affecting the growth of the private sector, for example solar system imports for off-grid solar uptake (CDKN, 2017). Studies suggest it is a major constraint to scale up critical energy access and fund further infrastructure development in Ethiopia (Power for All, 2021).

2. **Unfavorable collateral policy** – Banks and micro financial institutions in Ethiopia have high collateral requirements and there are limits to how much companies can borrow. This makes taking loans extremely inaccessible to small-holder farmers and agriculture SMEs, which are the backbone of Ethiopia's economy and vulnerable to the impacts of climate change. A World Bank study found Ethiopian SMEs to be one of the most credit constrained in the world with no access to a loan, line of credit, nor overdraft facility (World Bank, 2017b). These firms are also more likely to avoid loan applications altogether due to high collateral requirements (ISF Advisors, 2022). The NBE has issued a new directive on collateral policy to ease out the requirements, but the uptake has been slow (GIZ, 2022).

FINANCIAL BARRIERS

As discussed in Section 2.3, the majority of AFOLU and water projects in Ethiopia are funded through grants and concessional debt from public sources (88% and 100%, respectively). Also, very little tracked renewable energy financing went towards off-grid renewable energy solutions (3%). There is a lack of bankable projects in these sectors and appropriate financial products in Ethiopia due to following reasons:

- **High risk-low returns:** Small-scale farming, irrigation systems, and agribusinesses have high investment risks due to information assymetry, capacity constraints, and seasonality of cash flows. The returns are often low due to a lack of technical assistance and financial incentives for climate-smart practices.
- **High transaction costs:** Small scale agriculture, irrigation, and distributed renewable energy projects are typically too small and numerous to attract large-scale investors. Aggregating and securitizing a sufficient number of bankable assets with the same level of development can be difficult (CPI, 2020).
- **High interest rates:** Lack of consumer financing at favorable lending terms is making finance inaccessible for farmers and SMEs in Ethiopia. The Development Bank of Ethiopia (DBE), which is a specialized bank to extend support to priority sectors and projects, also charges loan interests of 8-12% to private financial instititions, such micro finance, which make them available at an even higher rate for SMEs. (World Bank, 2022b)
- **Lack of risk mitigation solutions:** Agriculture insurance and credit guarantee scheme for crops and livestock are very limited in Ethiopia to cover default risk or underperforming transactions (PIK, 2020).
- **High concentration risks:** The Commercial Bank of Ethiopia (CBE) holds more than 67% of total commercial banks assets and deposits which leads of lack of competition and innovation in the Ethiopian banking industry (Nega, 2018).

CAPACITY BARRIERS

Currently, in Ethiopia, there is a lack of institutional architecture to distribute technical and financial resources at all levels of the government and unlock potential benefits from the existing resources.

Technical capacity issues include the knowledge gaps in financial analysis, proposal development, and limited awareness on climate science and risk analysis. Limited focus on disclosure and reporting of climate financial flows by the public and private sector leads to inefficient investment decision making. A recent report suggests that Ethiopia does not have enough initiatives to provide reliable climate risk information and management tools to financial sector decision makers on both the public and private side (CDKN, 2022).

Frequent restructuring and shuffling of government staff leads to lack of buy-in and development of internal capacity within the governments. Implementation of long-term climate projects needs enhanced capacities of the project officers to conduct monitoring and evaluation and maintain compliance with gender, environmental, and social safeguards which needs advanced technical assistance.

COORDINATION BARRIERS

The Government of Ethiopia, especially at the federal level, has shown strong commitment to mainstream the objectives of the CRGE Strategy into development planning and functioning of various ministries, departments, and agencies. However, due to this top-down approach, the means of implementation are concentrated at the national level. There is a lack of institutionalization of the CRGE facility within the implementing agencies at the regional, woreda (districts), and kebele (wards) level. This issue becomes pronounced in the case of climate adaptation projects as adaptation is particularly context specific, cross cutting, and requires locally led initiatives. The sub-national actors play a crucial role in the design and delivery of projects and engaging with communities and beneficiaries. Increased engagement, empowerment, capacity building, and resource mobilization at sub-national level results in higher impacts of climate projects (GCA, 2019).

4. RECOMMENDATIONS

1. Enhance transparency on climate financial flows for better policy and investment decision making

The landscape of climate finance shows that limited or no information is publicly available on domestic climate budget expenditure in Ethiopia. There is a no official nor publicly available record or database which currently tracks financing from international NGOs, philanthropies, multilateral or bilateral development partners and private sector (UNFCCC, 2020). An assessment of FDI in flows from China for their climate relevance is also challenging due to the lack of project-level data.

Climate finance tracking in Ethiopia will benefit from the establishment of a climate budget tagging system. The system can take a form of a one-stop-shop for a publicly accessible, comprehensive knowledge management system that not only tracks domestic public expenditure but also consolidates international investments from public and private financial actors. Improving transparency around climate finance flows will enable more informed decision making. With a comprehensive picture of how climate finance is being received (instruments and at what cost), where funds are being channelled (regionally and by sector), more sophisticated analysis will be possible. For example, the private sector would be able to identify areas of opportunity, while the government will have a better understanding of entry points and the risk mitigation instruments that are most effective at crowding in funds.

The Ministry of Finance in Ethiopia is aware of this need and is collaborating with development partners to develop a climate-related expenditure tagging and tracking system. This is timely considering Ethiopia is also participating in the pilot phase of the Climate Responsive Public Financial Management Framework (PEFA Climate) module, which assesses the extent to which a country's public financial management system is ready to support and foster the implementation of climate change policies. A climate budget system will complement such an exercise. It will create an enabling environment for effective tracking and monitoring of climate related expenditures and undertake data-driven decision making.

2. Conduct a bottom-up climate finance needs assessment for identifying finance gaps and priority actions

Even though Ethiopia has conducted an assessment of climate finance needs to fund the CRGE vision, the analysis is very high-level with limited granualrity. It estimates a need of USD 316 billion by 2030, of which 80% is conditional. However, clear identification of investment needs and costs for the implementation of the CRGE and NDC at the sectoral level is required. The CRGE Facility should create an investment and financing plan with more granular analysis of sectoral activities and institutional capacity. The NAP implementation roadmap and resource mobilization strategy are steps in the right direction. Conducting a bottom-up needs assessment and providing the necessary fiscal and regulatory incentives for domestic and foreign investors to invest in sustainable and climate-friendly businesses will help in creating a resilient and green economy in long term.

3. Mobilizing private finance

Our analysis of climate financing flows shows the dominance of public investments across sectors, in line with Ethiopia's strong history of state led development. The Government of Ethiopia has already started the transition through the new Homegrown Economic Agenda (2019) and the New Investment Law (2020) that have led to opening up of many sectors such telecom, energy, railway, services etc. for domestic and foreign investment. However, there is still scope for unlocking private capital through following measures:

- **Development of capital markets** is key to fill the enormous climate financing gap in Ethiopia. Several efforts are underway, for instance, in 2021 the Ethiopian parliament enacted the Capital Markets Proclamation which paved the way for the creation of the Ethiopian Securities Exchange (ESE) (UNCTAD, 2021). The Ethiopian Capital Markets Authority will be the first-of-its-kind in Ethiopia to foster cooperation between the government and the private sector, including foreign investors (FSD Africa, 2022). Also, Ethiopian Investment Holdings (EIH), Ethiopia's first sovereign wealth fund, aims to attract private investment of at least USD 150 billion worth of state-owned assets in banking services, and telecom sector (Schipani Andres, 2022). The momentum needs to be harnessed to boost the private sector in the economy and mobilize finance for climate change related activities (IMF, 2021).
- **Leverage the potential of MFIs and digital financial services:** The microfinance sector is relatively well developed and are performing well compared to other Sub-Saharan African countries. Considering the relatively strong network and presence of MFIs in the country and huge potential of mobile banking services to increase energy access, the NBE should focus on providing favorable collateral and lending policies for the MFIs and to alleviate the licensing and authorization barriers for the mobile banking service providers.
- **Building a project pipeline for PPPs:** Recognizing the need for engaging the private sector for infrastructure development, Ethiopia has also enacted a new Public-Private Partnerships Proclamation (2018) as a way for a strategic use of scarce public investments. PPPs can also be instrumental in facilitating technology and knowledge transfer, promoting jobs, and improving the efficiency of essential services in Ethiopia. Therefore, an investable pipeline of PPP projects need to developed.
- **Developing blended financing instruments for risk-sharing:** A five-year partial credit guarantee scheme (with 50% risk-sharing) was implemented by the the Common Fund for Commodities in Ethiopia from 2011 to 2016 which successfully improved smallholder coffee cooperatives' access to bank loans and lower the collateral requirements. There were no defaults reported by the lending banks suggests that such schemes have the potential to be successfull and mobilise private investments with efficient use of public funds which needs to explored further (Gurmessa et al, 2021).

4. Capacity building for access and implementation

Multilateral Climate Funds (MCFs) are providing only 6% of the tracked climate financing in Ethiopia. Currently, only the Ministry of Finance is active as a National Designated Entity for accessing GCF funding for Ethiopia. The ministry and other development partners in Ethiopia can coordinate, enable, and empower prominent public and private financial actors in the ecosystem through enhanced knowledge of climate risk data and information as well as financial analysis and proposal building. This will help in accessing more international climate financing, mobilizing private investment for climate change, and mainstreaming climate considerations in their portfolios. This can also help Ethiopia build a more holistic and long-term strategy for climate finance mobilization.

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