Scoping Study Report: Feasibility of Green and Sustainable Finance Instruments in Ethiopia

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Abbreviations

Abbrev.	Meaning
AFOLU	Agriculture, Forestry, Other Land Uses and Fisheries
AU	African Union
BCCRF	Bangladesh Climate Change Resilience Fund
BCCTF	Bangladesh Climate Change Trust Fund
CAT	Catastrophe
CBD	Convention on Biological Diversity
CDM	Clean Development Mechanism
CF	Common Framework
CFF	Climate Finance Facility
CIS	Collective Investment Schemes
CORSIA	Carbon Offsetting and Reduction Scheme for International Aviation
CPI	Climate Policy Initiative
CR	Climate Resilient
CRGE	Climate Resilient Green Economy
CSR	Corporate Social Responsibility
DIBs	Development Impact Bonds
ECMA	Ethiopian Capital Market Authority
EIB	European Investment Bank
EPA	Environmental Protection Authority
FI	Financial Instrument
FIBCR	Fixed Income Bonds for Climate Resilience
FOLU	Forestry and Other Land Uses
GBP	Green Bond Principles
GCF	Green Climate Fund
GEF	Global Environment Facility
GLI	Green Legacy Initiative
GOF	Green Outcomes Fund
GTP	Growth and Transformation Plan
ILS	Insurance Linked Securities
IPPs	Independent Power Producers
ISCCC	Inter-Ministerial Steering Committee on Climate Change
LTFC	Long-Term Foreign-Currency
LTLC	Long-Term Local-Currency
MER	Main Ethiopian Rift
MoPD	Ministry of Planning and Development
NAP	National Adaptation Plan
NAPCC	National Action Plan on Climate Change
NCCAP	National Climate Change Action Plan
NCCRS	National Climate Change Response Strategy
NCFs	National Climate Funds
NDCs	Nationally Determined Contributions
NFVs	National Financing Vehicles

NKRCP	Northern Kenya Rangelands Carbon Project
NRT	Northern Rangelands Trust
OPPT	Online Partnership Plan Tool
PACT	Participatory Agriculture and Climate Transformation Programme
PES	Payments for Ecosystem Services
PPPs	Public-Private Partnerships
PoAs	Programme of Activities
SCF	Standardized Crediting Framework
SFDRR	Sendai Framework for Disaster Risk Reduction
SIBs	Social Impact Bonds
SIDAFF	Sustainable Infrastructure Development and Financial Facility
SLM	Sustainable land management
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
VCS	Voluntary Carbon Standards
WASH	Water, Sanitation, and Hygiene

Executive Summary

This document is a draft scoping study on green financial instruments in Ethiopia, commissioned by FSD Ethiopia on behalf of the Ethiopian Capital Market Authority (ECMA) in collaboration with FSD Africa and UNDP. The study examines the market, policy, regulatory, investment, and financing environment in Ethiopia to provide insights and recommendations for developing suitable green finance instruments that will address the financing needs for green growth and climate resilience projects.

Green and sustainable finance in this report refers to a broad definition and scope of projects and systems that supports economic development, job creation and growth that is environmentally and socially sustainable. Green and sustainable finance is understood to encompass projects with both environmental and social co-benefits as these are intrinsically linked (see further in Box 1). **In this report, the focus has mainly been on green finance instruments.**

The Ethiopian economy is vulnerable to climate and disaster risks, further exposed due to its high dependency on agricultural production with limited climate change adaptive capacity. The most pressing environmental challenges for Ethiopia are exposure to climatic hazards, which have so far cost Ethiopia between 1-1.5% of its annual GDP, with projections rising to 5% by the 2040s; land and ecosystem degradation with 20% of Ethiopia's total land area considered degraded, a cost of over US$ 4.3 billion a year; and water scarcity. Financial mechanisms to address climate hazards include nature-based solutions (NbS) and disaster risk reduction (DRR) solutions. Sustainable land management (SLM) practices and economic instruments for efficient water management are crucial for Ethiopia's sustainable development.

Ethiopia has implemented several initiatives and strategies to address climate change and promote sustainable development, notably the Climate Resilient Green Economy (CRGE) Initiative, the Long-Term Low Emission and Climate Resilient Development Strategy (2020–2050), and the Green Legacy Initiative (GLI). Our SWOT assessment on the enabling environment found strengths in CRGE strategy's commitment to limiting greenhouse gas (GHG) emissions, significant investments in renewable energies, large-scale reforestation programs, sustainable forestry management, integration into Ethiopia's ten-year development plan, and several sector-based strategies. Against this, incomplete emissions data, financial constraints, limited coordination between government agencies, and a green finance landscape largely driven by government and donors limits its ability to achieve Ethiopia’s overarching sustainable development goals. This is further threatened by macroeconomic instability, rising temperatures and erratic rainfall, unsustainable land-use practices, heavy reliance on donor financing, weak enforcement mechanisms, and perceived risk due to low knowledge and lack of sensitization on green financing projects.

Ethiopia faces major challenges in mobilizing sufficient green finance. Its climate finance mobilization efforts are low compared to other African countries and rely heavily on international public financing, with minimal private sector involvement. To attract private investment and transition to a low-carbon economy, Ethiopia needs to improve risk management, develop locally adaptable policies, and implement participatory processes. Opportunities exist in the form of attracting additional funding, technology adoption, expanding decentralized renewable energy, and encouraging private sector involvement in green finance projects. Against this backdrop are financial mechanisms that when structured, implemented and monitored well can mobilise and enable green finance flows into the country.

An initial list of 18 instruments were categorized into Funding/Investment, Results-based financing, and other financing instruments and later scored from 1 to 4 based on criteria like feasibility, demand, impact, and cost with assigned weights. **Five green financial instruments—Thematic Bonds (Green, Social, and Sustainable (GSS) Bonds, Blue Bonds, and Sustainability-Linked Bonds (SLBs)), National Green/Climate Funds, Banks, Vehicles, and Platforms, Impact Bonds, Sale of Carbon Credits, and Blended Finance (BF) Facilities and Transactions—were shortlisted and analysed for their feasibility in Ethiopia.**

Thematic bond issuances, debt instruments for sustainability projects, face challenges in Ethiopia due to limited technical know-how and a lack of a context appropriate green taxonomy framework.

National Green/Climate Funds, Banks, Vehicles, and Platforms, providing finance for climate change initiatives, require capacity building for project development and robust monitoring systems in Ethiopia, under the existing CRGE facility. Impact bonds, where returns are tied to achieving specific outcomes, face obstacles in Ethiopia due to the complexity of outcome measurement and limited technical capacity.

Sale of carbon credits, which offset emissions through project permits, are hindered by issues such as verifying GHG emissions reductions and ensuring permanence with existing transactions under the forestry sector.

BF Facilities and Transactions, utilising public capital to catalyse and mobilise private capital for sustainable projects, are hampered by limited technical capacity and regulatory frameworks. Despite these challenges, these instruments can, if developed correctly, align with Ethiopia's development goals and commitment to environmental sustainability. Furthermore, by effective implementation of these financing instruments, Ethiopia can enhance its capacity to fund vital green projects, driving progress towards a sustainable and resilient future.

The study also reviewed Ethiopia's project pipeline across sectors like agriculture, renewable energy, and water management. It identified funding needs, estimated costs, and proposed timelines for implementing green projects. This analysis is crucial for aligning financial instruments with specific project requirements and ensuring that the financing strategies are tailored to meet Ethiopia's sustainable development goals.

Ethiopia's commitment to sustainable development and climate resilience is evident in its ambitious strategies and initiatives. The mobilization of green and sustainable finance is hindered by several challenges. These include a complex institutional governance structure for implementing CRGE strategy, limited technical and implementation capacity (especially at the local level, which is crucial for implementation), regulatory gaps that limit private-sector participation, and macroeconomic instability. Inter-agency collaboration is central to Ethiopia's approach, with the CRGE Facility playing a pivotal role. Market-based institutions like ECMA and ESX are promoting sustainability, but challenges remain in ensuring consistent collaboration at sub-national levels. Investments in capacity-building are crucial, and the MoPD has prioritised training programs to address skill gaps.

Ethiopia faces various challenges in implementing proposed financial instruments, despite their potential benefits.

Thematic bond issuances, while offering sustainable financing, risk greenwashing and require greater expertise and awareness to be operational. Targeted support is needed to bolster existing green finance frameworks and address low domestic demand.

National Green/Climate Funds, Banks, Vehicles, and Platforms with varying private sector involvement can be established, but capacity building is crucial for attracting private investment, depending on the facility's goals, risk tolerance, and alignment with national investment promotion strategies exemplified by Indonesia's SDG One Platform.

Impact bonds, which align financial incentives with social outcomes, can attract private investment for social good, but challenges include complex outcome measurement, limited technical capacity, and high initial costs. Despite these challenges, Ethiopia's focus on sustainable development creates a favourable environment for impact bonds.

The sale of carbon credits offers great potential, leveraging Ethiopia's carbon sequestration capacity across forestry, agriculture, and energy sectors. Ethiopia can access international carbon finance through Article 6 mechanisms and has adopted the Standardized Crediting Framework (SCF) to streamline emissions reductions.

BF Facilities and Transactions have grown significantly in Sub-Saharan Africa. Ethiopia has taken steps to improve the environment, but the gap between financing demand and execution capacity remains. Blended Facilities and Transactions align with Ethiopia's development plan and sustainability goals, offering a potential green financing solution. Success with these financial tools requires collaboration between policymakers, financial institutions, and development partners to foster green finance and Ethiopia's green growth.

A summary of 10 broad recommendations has been brought forward in this report. These strategic recommendations aim to strengthen Ethiopia's green finance framework and support economic growth:

Enabling Environment (Policy and Regulation)

Develop a Cohesive Regulatory Framework: Enhance the regulatory environment to better support green finance instruments, including clear guidelines, standards, and specific regulations.

Establish Attractive Policies and Incentives: Implement policies that draw both domestic and international investors to Ethiopia's green market.

Strengthen Macroeconomic Stability: Advocate for macroeconomic policies that foster stability and confidence among investors, crucial for long-term sustainability and investment attraction.

Adapt Policies to Market and Environmental Changes: Ensure policies are flexible to adapt to changing environmental and economic conditions, promoting sustainable technologies and practices.

Enhance Government Coordination and Communication: Improve mechanisms for intergovernmental communication and coordination to streamline the implementation of green initiatives.

Capacity Building Across the Ecosystem

Engage and Educate Stakeholders: Actively involve a diverse range of stakeholders, including government bodies, financial institutions, and international partners, enhancing their understanding and engagement in green finance.

Invest in Training and Capacity Building: Focus on developing skills and capabilities within financial institutions, government agencies, and other stakeholders, particularly in investment banking and transaction advisory services.

Development of Financing Instruments

Establish a National Green Finance Framework: Develop a national "green finance taxonomy" and guidelines for sustainable securities, aligning with Ethiopia's priority sectors such as agriculture and energy.

Promote Private Sector Involvement through Incentives: Create incentives and de-risking mechanisms that encourage private investment in green projects, leveraging instruments such as public-private partnerships (PPPs).

Enhance Awareness and Outreach: Implement educational programs to raise awareness among the financial sector and potential investors about the opportunities and benefits of investing in green finance.

1 | Background

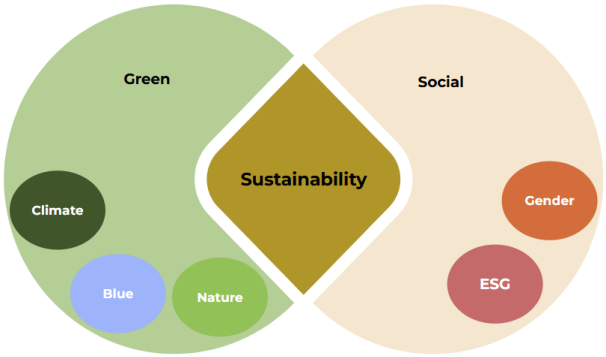
FSD Ethiopia on behalf of the Ethiopian Capital Market Authority (ECMA) and in collaboration with FSD Africa and UNDP, contracted Genesis Analytics to conduct a scoping study that looks at the opportunities and challenges/gaps to create a pipeline of transactions and suitable investment structures and instruments like green bonds, green investment bank, etc.

The study aims to examine the market, policy, regulatory and investment and financing environment in Ethiopia to provide insights and recommendations of potential interventions that can be undertaken to develop suitable green finance instruments to address the financing need for green growth and climate resilience projects in Ethiopia, and proposals on interventions that will improve issuance, policy and regulatory frameworks to support the sovereign, municipalities and corporates to launch and issue green finance instruments suitable for the investment and financing environment in Ethiopia. The findings of the study were validated by relevant stakeholders in a workshop in Addis Ababa on 28 March 2025.

Box 1: Green finance definition used

There is no universal definition of green finance, and it's often interchanged with sustainable finance and climate finance. Green finance is frequently used interchangeably with 'sustainable finance' and 'climate finance,' though slight nuances exist: Sustainable finance is commonly understood to include broader environmental, social, and governance (ESG) considerations, while climate finance strictly targets climate change mitigation and adaptation efforts. Despite this lack of a universal definition, green finance is unified by its objectives:

- Supporting green economic growth and development, growth that fosters job creation, equality, prosperity and social development,
- Reducing financial risks associated with climate change and other environmental challenges,
- Steering economic development towards a low-carbon pathway.



1.1 Ethiopia's economic and fiscal context

Ethiopia's economy is vulnerable to climate and disaster risks due to its geographical location, multiple socio-economic stresses, and low adaptive capacity. Ethiopia is a landlocked lower-middle-income country, with a gross domestic product (GDP) of US$ 163.7 billion, GDP per capita of US$ 1,272 as of 2023, and a population of 128.7 million people.[1] Ethiopia is among the countries most vulnerable and least adapted to climate risk, ranked as the 38th most vulnerable country and the 156th most ready country, out of 181 countries on the ND-GAIN Country Index in 2022.[2] Its vulnerability has been attributed to its large dependency on agricultural production and has a limited climate change (CC) adaptive capacity.

Ethiopia's fiscal position has been characterized by both opportunities and challenges. Public debt has been rising - approximately 50% of its GDP (US$ 59.3 billion),[3] with a significant portion owed to external creditors - external debt service making up 58% of total debt service (US$ 1.27 billion).[4] The government in 2021 applied to the G20 Common Framework (CF) for debt relief as part of its effort to restructure sovereign debt and manage financial constraints following the COVID-19 pandemic. Despite this effort, Ethiopia faced significant financial difficulties and defaulted on its external debt in December 2023. This default was mainly attributed to delays in the CF process.[5] Restoration Ethiopia's fiscal sustainability is currently ongoing with support from the IMF and World Bank for temporary suspension of debt payments until December 2024 and long-term debt restructuring dependent on an IMF program.[6]

The population in Ethiopia is approximately 128.7 million with 78% of the population residing in rural areas. According to the United Nations Development Programme (UNDP) 2023-24 Human Development Index report, the country is ranked number 176 out of 193 countries with 69% of the population living below national poverty lines.[7]

[1] World Bank Open Data. https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=ET [Accessed Jan 2025]
[2] Ethiopia | ND-GAIN Index. (n.d.). https://gain-new.crc.nd.edu/country/ethiopia [Accessed Jan 2025]
[3] Zafar, A. (2024, August 22). Options for resolving Ethiopia's debt. *Brookings*. [Accessed Jan 2025]
[4] Agbetiloye, A. (2025, January 20). Top 10 African countries with the highest external debt in 2025. *Business Insider Africa*. [Accessed Jan 2025]
[5] *Ops cit.*
[6] Analytics, G. C. (2023, December 9). Ethiopia's Debt Restructuring: a pathway to Fiscal sustainability. GCA-ET. [Accessed Jan 2025]
[7] United Nations. (2024, March 13). Human Development Report 2023-24. Human Development Reports. [Accessed Jan 2025]

Ethiopia's economic outlook is still positive - economic growth is projected at 6.7% in 2024-25 with fiscal consolidation and ongoing economic reforms.[8] The country's fiscal position is also expected to improve with expected narrowing of fiscal deficit with improved tax revenues.[9]

Ethiopia's commitment to both climate change mitigation and adaptation is seen through its policy commitment under the Climate Resilient Green Economy (CRGE) Initiative, Long-Term Low Emission and Climate Resilient Development Strategy (2020–2050), and the Green Legacy Initiative (GLI). As a result, for example the United Nations Development Program (UNDP) has pledged to assist Ethiopia in mobilizing US$ 2 billion in green financing by 2030. This effort will leverage mechanisms such as green bonds, carbon credits, debt swaps, and payments for ecosystem services.[10]

1.2 Impact of climate and environmental risks in Ethiopia

Ethiopia is a landlocked country in Northeastern Africa with a highly diverse climate, ranging from tropical rainforest conditions in the south and southwest to arid desert-like conditions in the northeast and southeast. The effects of climate change are affecting the seasons with more extreme weather events, both excess rain and dry spells, expected. Drought remains as the most damaging climate stressor whose incidences are linked closely with El Niño events.[11] Re-occurring droughts between 2020-2023 severely impacted 11 million people that caused migration and displacement of these people across the Horn of Africa.[12] These trends illustrate the need to both adapt to flood events and at the same time to prolonged dry periods (slow-onset drought).

Climate impacts are estimated to currently cost Ethiopia between 1 - 1.5% of its annual GDP.[13] Projections for the CC impact on economic growth is estimated to rise to 5% by the 2040s, affecting agricultural productivity and infrastructure for a hydropower-reliant Ethiopia.[14] Climate shocks from both floods and droughts pose a significant risk to rural livelihoods in Ethiopia characterized by 90% of smallholder agriculture using rainfed production systems.[15] Furthermore, changes in climate will see an increase by up to 35% of the number of people facing water scarcity in Ethiopia by 2040.[16] Other impacts of climate change include landslides, with the most devastating landslide occurring in the Gofa Zone in Southern Ethiopia, triggered by heavy rains. The 2024 Gofa Landslides buried two villages, resulting in the deaths of at least 257 people and injuring 1,212.[17]

1.2.1 Ethiopia's environmental needs and priorities

The following environmental challenges are the most pressing for Ethiopia, based on desk reviews, policy assessments and consultations. For each of these factors, the extent of the damage, immediate causes, the driving factor type, the consequences and impact are presented below (see Table 1). The table presents a summary of these needs and priorities in an indicative manner.

It is worth noting that due to the closely related causal interlinks, most of these challenges are intertwined, and can be seen both as causes and consequences of one another.

Table 1: Summary of the most pressing socio-environmental challenges and impacts in Ethiopia, as well as related green growth/resilience measures

Environmental challenges	Sector	Causes	Related Green Growth and Resilience Measures	Driving factor by type	Consequences - Impact
Exposure to climatic hazards: floods, drought, landslides	All	• Climate change causing extreme weather events - increased temperatures, rainfall intensity, unreliable rains	• Improved water management • Drought-resistant crop varieties • Famine early warning systems • Promoting drought-resistant livestock breeds	Mostly external driven by natural (climate and geophysical forces) exacerbated by anthropogenic factors (desert locust infestations,[19] active rift	• Affected livelihoods, displacement and increased vulnerability of the population • Infrastructure loss and damage • Spread of waterborne diseases

[8] African Development Bank (AfDB). (2024) African Economic Outlook (AEO): Ethiopia Economic Outlook. [Accessed Jan 2025]
[9] *Ibid*
[10] United Nations Development Program (UNDP). (2025, January 17). Ethiopia's Green Finance and Energy Landscape Takes Center Stage at Annual Development Conference. UNDP. [Accessed Jan 2025]
[11] Climate Risk Profile: Ethiopia. (2024, November 1). Global Climate Change. [Accessed Jan 2025]
[12] *Ibid*
[13] World Bank Group. (2024). Ethiopia Country Climate and Development Report, February 2024. *CCDR Series*. Washington, DC: World Bank. [Accessed Jan 2025]
[14] *Ibid*
[15] Rainfed agriculture in Ethiopia: climate vulnerability and adaptation. (n.d.). Chair of Hydrology and Water Resources Management. [Accessed Jan 2025]
[16] *Ops cit.*
[17] Al Jazeera (2024, July 23). At least 229 people were killed in Ethiopia landslides. Al Jazeera. [Accessed Jan 2025]
[19] FAO. (2020). Desert locust crisis appeal. [Accessed Jan 2025]

Environmental challenges	Sector	Causes	Related Green Growth and Resilience Measures	Driving factor by type	Consequences - Impact
			• Integrating climate information into decision-making[18]	escarpment of the Main Ethiopian Rift (MER)[20])	• household (indoor) and ambient (outdoor) air pollution
Land and ecosystem degradation: desertification	Agric. Water	• Soil erosion due to climate characteristics and fluctuations • Unsustainable land uses • Deforestation from heavy reliance on biomass by households, such as fuelwood and charcoal • Overgrazing and poor agricultural practices	• Livelihood adaptation investments • Sustainable grazing practices • Reafforestation and afforestation • Energy sector reform, driven by renewable energy sources and sustainable grids and networks. This will increase electrification across sectors (industry, transport, cooking) • Sustainable agriculture and value chain improvements	Mostly internal, including • Use of biomass for household energy needs • Limited electrification • Sub-optimal agricultural sector development	• Limited pasture areas triggers conflict among pastoralists, farmers and herders[21] • Decrease in food production and causes malnutrition • Reduction of the amount of land available to agriculture
Water scarcity[22]	Agric. Water Energy	Low water storage capacity Rainfall and evaporation changes leads to changes in surface water infiltration and groundwater recharge	• Improved water management and water storage • Measures for improved water utility, especially at the municipal level. • Adopting integrated water resources management (IWRM) with resilient infrastructure and related policies and governance.	External - river flow volume changes and internal - unsustainable water uses	Higher vulnerability of freshwater supplies Drying of wetlands, impacting key bird species Disruption of hydropower generation

1.2.1.1 Exposure to climatic hazards: floods, drought, landslides

Financial mechanisms to address climate hazards must be tailored to the specific context and nature of the hazard. Broadly, these tools can be categorized into two groups:

- **Investment in green, climate resilient (urban/energy/road) infrastructure,** is a critical measure for climate resilience in the context of rapid urbanisation.
- **The adoption of Nature-based solutions (NbS)**, which use natural means to address environmental risks across key sectors such as infrastructure, agriculture and forestry.
- **Disaster Risk Reduction (DRR) solutions**, which focus on ensuring financial resources are available for timely and effective mitigation of natural hazards.

Infrastructure investment and the use of Nature-based solutions (NbS)

NbS are increasingly being considered as an option to reduce vulnerability to climate hazards, creating co-benefits while protecting ecosystem services in the context of changing weather patterns with more frequent and extreme weather events. NbS are actions that "protect, sustainably manage, and restore natural or modified ecosystems, that address societal challenges effectively and adaptively, simultaneously providing human wellbeing and biodiversity benefits".[23] International policy arenas feature NbS including the Paris Agreement, under the United Nations Framework Convention on Climate Change

[18] Gumma, Murali Krishna, Tilahun Amede, Mezegebu Getnet, Bhavani Pinjal, Gizachew Legesse, Gebeyaw Tilahun, Elisabeth Van den Akker, Wolf Berdel, Christina Keller, Moses Siambi, and Anthony M. Whitbread. (2022). Assessing potential locations for flood-based farming using satellite imagery: a case study of Afar region, Ethiopia. Renewable Agriculture and Food Systems, *37(S1),* S28-S42.
[20] Martínek, K., Verner, K., Hroch, T., Megerssa, L. A., Kopačková, V., Buriánek, D., Muluneh, A., Kalinová, R., Yakob, M., and Kassa, M. (2021). Main Ethiopian Rift landslides formed in contrasting geological settings and climatic conditions, Nat. Hazards Earth Syst. Sci., 21, 3465–3487. [Accessed Jan 2025]
[21] IIED (International Institute for Environment and Development). (2022). Moving forward with communal land rights in Ethiopia: what are the legal solutions? [Accessed Jan 2025]
[22] Coffel, Ethan D., Bruce Keith, Corey Lesk, Radley M. Horton, Erica Bower, Jonathan Lee, Justin S. Mankin. (2019). Future hot and dry years worsen Nile Basin water scarcity despite projected precipitation increases. *Earth's Future, 7(8)*, 967-977.
[23] IUCN. (2016). Defining Nature-based Solutions. International Union for the Conservation of Nature. [Accessed Feb 2025]

(UNFCCC), as one of the approaches needed to tackle climate change; the Sendai Framework for Disaster Risk Reduction (SFDRR); the Convention on Biological Diversity (CBD), the United Nations Convention to Combat Desertification (UNCCD), the Bonn Challenge of restoring 150 million hectares (ha) of degraded and deforested landscapes; and the New Urban Agenda (Habitat III).

A distinct feature of NbS, is that they promote broader, sustainable socio-economic development by providing benefits both for human well-being and biodiversity. Common examples in the context of African countries include regenerative agroforestry, green water management across infrastructure and watershed improvement. A recent report by the European Investment Bank (EIB), provides a useful categorisation of NbS, detailing the eligible sectors for financing and provides some examples within each category.[24]

Table 2: Different areas of NbS interventions across Ethiopia's priority sectors under CRGE

Priority Sectors in Ethiopia	NbS initiatives	Examples across Africa
Agriculture	Practices that build resilience, enrich soils, improve watersheds, and enhance ecosystem services by increasing biodiversity. Examples include cover cropping, crop rotation, buffer areas, and no-tillage practices.	Upper Awash Basin Restoration (Ethiopia) through reforestation, soil and water conservation, and sustainable land management practices. The initiative helps improve water quality and availability for downstream users, including the capital city, Addis Ababa. Gishwati-Mukura Landscape Restoration (Rwanda) by reforesting degraded areas, protecting existing forests, and promoting sustainable land use practices.
Forestry	Safeguarding environmental value and services through commercial production, for example, by managing invasive species, adopting silvicultural practices, and protecting riverine areas.	Smallholder Regenerative Agroforestry (Tanzania, South Africa, Kenya, Malawi, and Zambia) focusing on integrating trees into agricultural landscapes to improve soil health, increase biodiversity, and enhance carbon sequestration Government of Kenya's 15-Billion Tree Campaign to facilitate NbS investments to restore natural capital and create green jobs
Infrastructure	Vegetation can be used as a roof or wall covering instead of artificial materials, for example in green roofs and walls systems. Infrastructure projects that mitigate erosion, including that caused by human activity Management of green water through ecosystem-based rainwater collection systems and water re-use systems that utilize plants and other ecosystem elements as natural filters.	Zambia is part of the Green-Gray Infrastructure Accelerator, which integrates NbS with traditional infrastructure to enhance climate resilience, helping cities manage water resources, mitigate flood risks, and expand urban green spaces. Windhoek Water Reclamation Plant (Namibia) is one of the world's oldest direct potable reuse plants. The plant treats wastewater to drinking water standards, providing a reliable water source in this water-scarce region. The Erosion and Watershed Management Project (NEWMAP) in Nigeria addresses severe gully erosion in the southeastern parts. It includes the construction of drainage systems, check dams, and reforestation efforts to stabilize soil and prevent further erosion.
Industrial sectors	Creating green jobs and business opportunities Reducing water and energy costs	Nigeria is developing eco-industrial parks that integrate NbS to manage waste, reduce emissions, and enhance resource efficiency. These parks use green infrastructure, such as vegetated swales and bioswales, to manage stormwater and reduce flooding risks
Power	Strategies to mitigate the impacts of extreme heat and enhance energy efficiency Increase durability of structure and its interlinkage to nature	Noor Ouarzazate Solar Complex (Morocco) integrates NbS by incorporating vegetation around the facility to reduce dust and improve the efficiency of solar panels. The project also includes measures to protect local biodiversity and promote sustainable land use.
Transport	Creation of green spaces, permeable pavements, and bioswales along transport corridors to enhance water infiltration and reduce runoff	In Cape Town (South Africa), the integration of green infrastructure with traditional transport infrastructure helps manage stormwater and reduce flood risks. This includes the use of vegetated swales, green roofs, and rain gardens to capture and treat stormwater runoff

Source: Author based on linked sources

Despite NbS' significant environmental and societal benefits, they are often perceived as long-term investments with difficult-to-quantify results, leading to a perception of high risk. This perception hinders the mobilization of capital at the necessary scale. NbS initiatives vary in size and can be financed through various channels: public funding (state, municipalities), commercial funding (public development banks or private financial institutions), concessional funding (public institutions, philanthropies, or NGOs), carbon credits and other nature-based results instruments such as nature results-linked bonds (leveraging the carbon sequestration potential of natural ecosystems to provide a financial incentive for landowners and

[24] European Investment Bank (EIB). (n.d.). Investing in Nature: Financing Conservation and Nature-Based Solutions: A Practical Guide for Europe. In the European Investment Bank's Natural Capital Financing Facility. [Accessed Feb 2025]

communities), or blended finance (combining concessional and commercial funding).[25] However, compared to risk-averse mainstream actors such as institutional investors, development finance institutions and philanthropists are more willing to invest in long-term, outcome-oriented activities in frontier emerging markets like Ethiopia.

Disaster Risk Reduction (DRR) solutions

DRR, as defined under the Sendai Framework for Disaster Risk Reduction (SFDRR), refers to "the systematic approach to identifying, assessing, and reducing the risks of disaster. It aims to reduce the damage caused by natural hazards like earthquakes, floods, droughts, and cyclones through an ethic of prevention".[26] A disaster risk finance (DRF) toolkit developed by GIZ provides practical guidance on how to choose a particular DRF instrument for different contexts. The toolkit considers instruments for i) Risk reduction, such as loans, micro-credit, bonds, grants, subsidies & tax breaks, and impact bonds; ii) Risk retention, such as reserve funds, contingent loans; and lastly, iii) Risk transfer, such as micro-insurance, agricultural insurance, risk pooling, catastrophe bonds. Figure 1 summarises the proposed taxonomy, specifying which tools are most appropriate by which type of risk holder and the main purpose of the funds.

Figure 1: Taxonomy of DRF instruments

		Risk Holder				Purpose			Timing			Risk Level			
		What is the capacity and need of the risk holder?				What will funds be spent on?			When is funding needed?			What level of risk is being addressed? (return period)			
Action	Instrument	Individual	Community	Municipality	Sovereign	Life & Livelihood	Operational	Physical Assets	Preparation	Response	Recovery	Annual	1-10 year	10-50 year	50+ year
Risk Reduction	Loan	•	•	•	•	•		•	•		•	•	•		
	Micro-credit	•	•			•		•	•		•	•	•		
	Bonds			•	•			•	•		•	•	•	•	•
	Grants, subsidies, & tax breaks	•	•	•	•	•		•	•	•	•	•	•		
	Crediting	•	•	•		•		•	•		•	•	•	•	•
	Impact Bonds	•	•	•	•	•	•	•	•		•	•	•	•	•
Risk Retention	Budget Contingency			•	•		•			•		•	•		
	Reserve Funds	•	•	•	•	•	•	•		•	•	•	•		
	Contingent Loans				•		•			•	•		•	•	
Risk Transfer	Micro-insurance	•	•			•		•		•	•		•	•	•
	Agriculture Insurance	•	•			•				•	•		•	•	•
	Takaful & Mutual Insurance	•	•	•	•	•	•	•		•	•		•	•	•
	Insurance & Reinsurance	•	•	•	•	•	•	•		•	•		•	•	•
	Catastrophe Bonds			•	•	•	•	•		•	•			•	•
	Risk Pools			•	•		•	•		•	•		•	•	•

Source: Meenan et al. (2019)[27]

1.2.1.2 Land and ecosystem degradation: desertification

Economic valuation of land restoration in Ethiopia indicates that such investments can be highly beneficial, not only for the environment but also for the livelihoods of local communities.[28] The authors argue that this can be done, for example, by allowing natural regeneration of overgrazed landscapes (notably the Abreha we Atsebeha watershed where local communities have worked together to rehabilitate the land, leading to significant environmental and economic benefits[29]); and restoring degraded forest landscapes (restoration diagnostic in Sodo and Meket woredas[30]). These suggestions are all contained in the broad arena of sustainable land management (SLM) practices.

Sustainable land management (SLM) practices

SLM practices are techniques that maintain and improve the long-term productivity and ecological health of land resources. These practices aim to find a balance between the needs of agriculture, forestry, and other land uses while protecting and

[25] Van Raalte, D., Ranger, N., Global Center on Adaptation, Environmental Change Institute, & University of Oxford. (2023). Financing Nature-Based Solutions for Adaptation at Scale: Learning from Specialised Investment Managers and Nature Funds. [Accessed Feb 2025]
[26] What is the Sendai Framework for Disaster Risk Reduction? (2023, April 4). UNDRR. [Accessed Feb 2025]
[27] Meenan, C., Ward, J., & Muir-Wood, R. (2019). Disaster Risk Finance - A Toolkit. In GIZ ACRI+ Commissioned Report. [Accessed Feb 2025]
[28] Mekuria, W., Veldkamp, E., Tilahun, M. and Olschewski, R. (2011). Economic valuation of land restoration: The case of exclosures established on communal grazing lands in Tigray, Ethiopia. Land Degrad. Dev., 22: 334-344. [Accessed Feb 2025]
[29] Haile, M., Livingstone, J., & Shibeshi, A. (2020). Landscape restoration in Ethiopia's drylands (Nick Pasiecznik, Ed.). [Accessed Feb 2025]
[30] Ethiopian landscape restoration in 3 steps: Motivate, enable and implement. (2022, June 27). IUCN. [Accessed Feb 2025]

enhancing the environment. Principles for good SLM practices are triple win solutions through addressing ecosystem concerns while increasing productivity with an aim to increase livelihoods and human wellbeing.

Table 3: Principles of good SLM practices against current conditions in Ethiopia[31]

Principles of good SLM practices	Description	Current conditions in Ethiopia
Increased land productivity	Increasing water productivity (water use efficiency) Enhancing soil organic matter and soil fertility (carbon and nutrient cycling) Improving plant material (species and varieties)	Ethiopia experiences severe nutrient mining, which is the highest compared to other Sub-Saharan African countries[32] Soil acidity is a major problem in several basins, including Abbay, Awash, Rift Valley Lakes, Omo-Gibe, and Tekeze[33]
Improved livelihoods	Economic returns Food security Poverty reduction Improving health	Improving irrigation management and market conditions can enhance the economic returns - economic productivity study of the Fincha'a and Koga irrigation schemes in the Abbay River Basin[34] A study in the Demba Gofa District of southern Ethiopia found that small-scale irrigation significantly increased household farm income[35]
Improved ecosystems	Improving micro-climate Climate change adaptation and mitigation Preventing, mitigating and rehabilitating degraded land	Ethiopia has lost ~ 78.6 thousand hectares of natural forest in 2023, contributing to significant CO_2 emissions[36] Ethiopia's forests store about 2.76 billion tons of carbon[37] Approximately 20% of Ethiopia's total land area is considered degraded[38], with a cost of over US$ 4.3 billion a year. About 1 billion tons of topsoil losses each year[39]

Source: Author based on footnote sources

The traditional barriers to finance for SLM are similar to those for the agriculture sector - poor enabling environments, lack of capacity to manage risk exposure, high transaction costs. The integration of green finance into SLM faces similar barriers to those of green project investments. These include (1) inconsistent regulations create investment risk, so clear and consistent policies are essential; (2) shortage of green finance and project preparation expertise limits viable green project development; (3) falsely marketing projects as green undermines investor confidence; standardized green financing definitions and norms are key; (4) political instability hinders green financing adoption and long-term sustainable project implementation; (5) uncertain economic conditions from the Birr's volatility impact fund availability and investor willingness; and (6) high costs and perceived low returns of green projects deter investment, so innovative financial instruments are needed.[40, 41]

To address some of these barriers, FAO and IUCN proposes guidelines to attract additional capital through innovative financing mechanisms:[42]

Step One: Once the context has been understood, an appropriate financing mechanism can be selected depending on the modality, the SLM practice promoted, and key stakeholders involved.

Step Two: Determine the costs involved, the bearer of the costs, monitoring entity, duration and geographical scale

Step Three: Generate the necessary legal/policy documents, agreements between parties, address barriers to implementation and validation of the process.

Examples of these innovative financing mechanisms include:

[31] Liniger, H.P., R. Mekdaschi Studer, C. Hauert and M. Gurtner. (2011). Sustainable Land Management in Practice – Guidelines and good practices for Sub-Saharan Africa. TerrAfrica, World Overview of Conservation Approaches and Technologies (WOCAT) and Food and Agriculture Organization of the United Nations (FAO). [Accessed Feb 2025]

[32] Yeneneh, N., Elias, E. & Feyisa, G.L. (2024). Monitoring soil quality of different land use systems: a case study in Suha watershed, northwestern highlands of Ethiopia. Environ Syst Res 13, 7. [Accessed Feb 2025]

[33] Water and Land Resource Centre (WLRC) (2024, Aug). Assessing Soil Resources in Five Basins of Ethiopia: Abbay, Awash, Rift Valley Lakes, Omo-Gibe, and Tekeze. [Accessed Feb 2025]

[34] Bashe, T., Alamirew, T. & Dejen, Z.A. (2024). Economic productivity of irrigation water in large-scale irrigation schemes with different typologies: the case of Fincha'a and Koga irrigation schemes in the Abbay River Basin, Ethiopia. Sustain. Water Resour. Manag. 10, 42. [Accessed Feb 2025]

[35] Oyato, M.T., Baygeda, K.A., Borano, G.B. et al. (2024). Effect of small-scale irrigation on rural household agricultural income in Demba-Gofa District, Southern Ethiopia. Discov Agric 2, 120. [Accessed Feb 2025]

[36] Global Forest Watch (GFC). (n.d.). Ethiopia deforestation Rates & Statistics | GFW. [Accessed Feb 2025]

[37] Moges. Y, Eshetu, Z. and Nune, S. (2010). Ethiopian Forest Resources: Current Status and Future Management Options in view of Access to Carbon Finances. Ethiopian Climate Research And Networking and UNDP. [Accessed Feb 2025]

[38] UNCCD Data Dashboard. (n.d.). [Accessed Feb 2025]

[39] Yesuf, M., Mekonnen, A., Kassie, M., Environmental Economics Policy Forum of Ethiopia, & Pender, J. (2006). The cost of land degradation in Ethiopia: A review of past studies. In A. Lufafa & E. Lutz (Eds.), World Bank. [Accessed Feb 2025]

[40] Investment Barriers to Sustainable Finance: How to enable the transition in G20 economies. (n.d.). Economy and Finance. [Accessed Feb 2025]

[41] Kharb, R., Shri, C., Singh, P. et al. Modelling the barriers of green financing in achieving environmental sustainability: an analysis using TISM. Environ Dev Sustain (2024). [Accessed Feb 2025]

[42] FAO and IUCN. (2021). Innovative financing mechanisms for promoting sustainable land management. Colombo, FAO. [Accessed Feb 2025]

- Payments for Ecosystem Services (PES)
- Re-allocation of public budgets
- Agro tourism
- Green loans
- Corporate Social Responsibility (CSR)
- Certification schemes and market access
- Insurance schemes

1.2.1.3 Water scarcity

Despite possessing abundant water resources, the uneven geographic and temporal distribution of rainfall exacerbates water accessibility issues, affecting both urban and rural populations. Rapid population growth and agricultural expansion further strain these resources, leading to conflicts over water usage and impacting food security. Additionally, inadequate infrastructure and investment in water management hinder effective utilization and conservation of water resources. Addressing these challenges is critical for Ethiopia's sustainable development and requires comprehensive water resource management and innovative financing solutions.

To promote efficient water management, various economic instruments have been implemented globally and can be considered for adaptation in contexts similar to Ethiopia. These instruments are designed to encourage the efficient and sustainable use of water resources through financial incentives and penalties. Here are some commonly used economic instruments:

Table 4: Economic instruments for efficient and sustainable water management

Economic Instrument	Description	Example
Water pricing mechanisms	Setting tariffs for water use based on the volume consumed encourages conservation and helps recover the cost of water supply services, making the water sector financially sustainable	The Koga irrigation scheme in Ethiopia has shown that farmers are willing to pay for irrigation water, which can support sustainable water management[43]
Water markets and trading	Creation of markets where water rights can be traded, allowing water to be allocated to those who value it most, promoting efficient water use and encouraging users to conserve water	Ethiopia's Water Resources Management Policy recognizes water as an economic good providing allowance for water trading with willingness to pay being promoted[44]
Water quality trading	Exchange of pollution credits, incentivizing reductions in water pollutants and promoting cleaner water practices	The Ethiopian Water Resources Management Policy further allows for appropriate water pollution prevention and control strategies[45]
Pollution charges and fees	Levying charges on discharging pollutants into water bodies encourages industries to treat wastewater to meet regulatory standards and reduce pollution levels	
Incentives	Offering incentives, in the form of subsidies or rebates for water-saving technologies, reducing the initial cost barrier and encouraging adoption by households and businesses	Incentives for drip irrigation systems, rainwater harvesting, and wastewater recycling to encourage water-saving technologies and practices
Public-Private Partnerships (PPPs)	Collaborating with private sector entities can bring in additional funding and expertise for water management projects, ensuring more efficient and sustainable outcomes	PPPs can mobilize private sector investment in water infrastructure, improving service delivery and efficiency[46]
Public awareness campaigns	Educating the public about the value of water and efficient usage practices can support the effectiveness of other economic instruments by altering consumer behaviour towards more sustainable practices	Promoting IWRM - a participatory process requiring capacity building of stakeholders for proper participation.

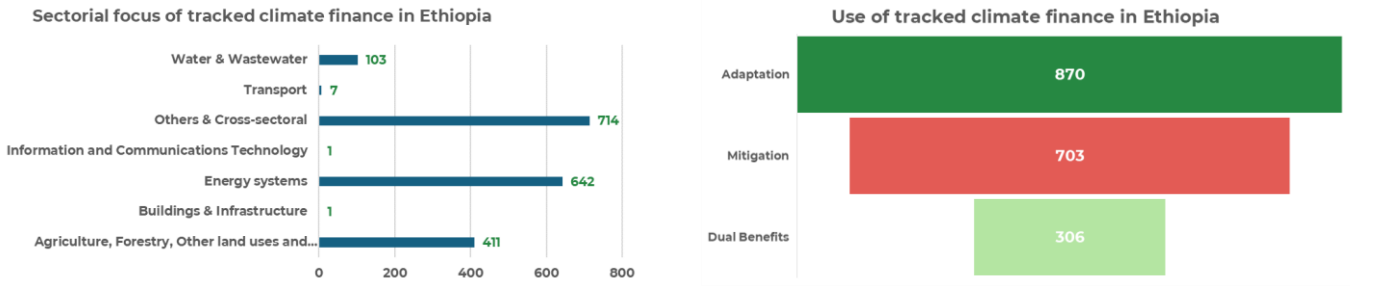
Source: Author based on linked sources

[43] Tegen, H. and Enkuahone, K. (2022). Impact of the Koga Irrigation Project on the Livelihood Improvement of the Rural Community in Mecha District, Amhara Region, Ethiopia. Ethiopian Journal of Business and Economics, 12, 2. [Accessed Feb 2025]
[44] Ministry of Water Resources (2014). Ethiopian Water Resources Management Policy. [Accessed Feb 2025]
[45] *Ibid*
[46] *Ibid*

1.3 Context of green finance in Ethiopia

According to the Climate Policy Initiative (CPI), Ethiopia accessed US$ 1.9 billion of climate finance from international and domestic resources,[47] in the years 2021 and 2022, an 11% decline from the years 2019 and 2020.[48] Out of this, 38% is dedicated to cross-sectoral sectors (US$ 714 million), 34% to energy systems (US$ 642 million), 22% to Agriculture, Forestry, Other Land Uses and Fisheries (AFOLU) (US$ 411 million), and 5% to water and waste water (US$ 103 million). Adaptation received the major focus with 46% of financing, while mitigation had 37% of financing.[49]

Figure 2: Tracked climate finance in Ethiopia, sectorial & use of funds (in millions US$)



Source: Climate Policy Initiative. (2024, October 24). Landscape of Climate Finance in Africa 2024: Interactive Data Tools - CPI.

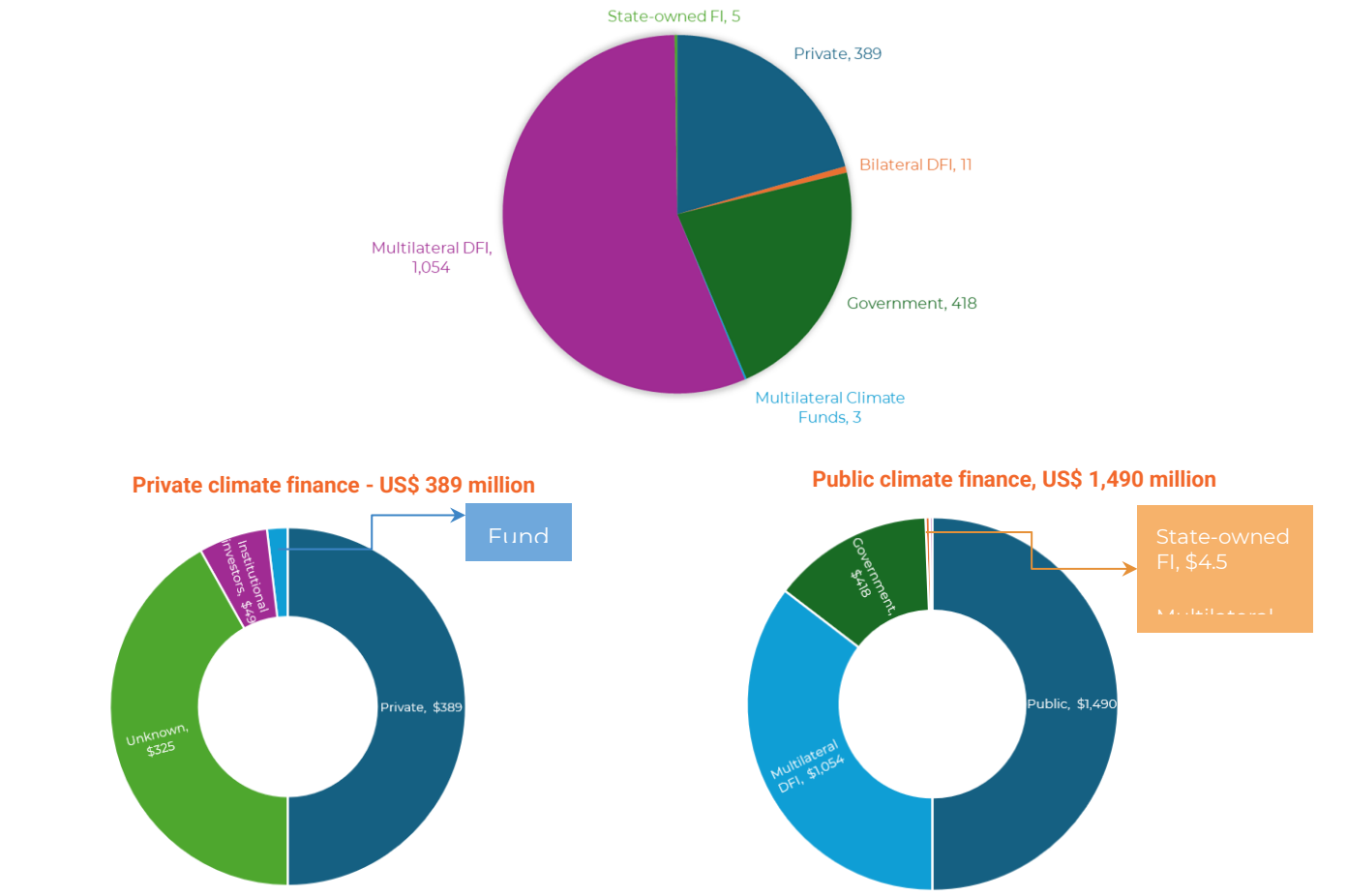
Most climate finance came from public sources – US$ 1,490 million – while only US$ 389 million came from private sources. *Of the public sources,* multilateral development finance institutions (DFIs) providing 56% (US$ 1,054 million), followed by government at 22% (US$ 418 million), bilateral DFIs providing 1% (US$ 11 million), and state-owned financial institutions (FIs), and multilateral climate funds providing 0.2% (US$ 3.1 million).[50] The main climate finance instrument from public sources was grants (59%).[51] *Of the private sources*, unknown providing 17% (US$ 325 million), followed by institutional investors providing 3% (US$ 49 million), households/individuals providing 1% (US$ 15 million), and funds providing 0.004% (US$ 0.1 million).[52] The main climate finance instrument from private sources was market-rate and balance sheet debt financing used by commercial banks at 48% and 23% respectively.[53]

Private sector flows have been low mainly due to historic state-led infrastructure development programs. This led to high growth alongside challenges on increased levels of foreign debt and inflation. However, the new Homegrown Economic Reform Agenda[54] aims to enhance financial sector development and develop capital markets, with the goal of steering private investment in human and economic development within priority sectors.

Furthermore, carbon markets hold a tremendous opportunity for Ethiopia to attract private climate finance. Despite it being at a nascent stage, the established a voluntary carbon market mechanism to support urban afforestation activities under its Nationally Appropriate Mitigation Actions (NAMA) initiative has great potential.[55] In 2022, the World Bank funded the 'Oromia National Regional State Forested Landscape Project' has shown great progress. It is a forest management plan for 123,455 ha of natural forest through participatory forestry management (PFM), establishing 78 legally registered forest communities with 30% women participants. The Emission Reduction Purchase Agreement (ERPA) was signed in February 2023 offering a grant of up to US$ 40 million for results-based payment, resulting from reduced emissions through forest preservation and other environment-friendly land uses, including livestock management.[56] Furthermore, the development of a carbon market framework through the National Carbon Market Strategy (NCMS) by the Ministry of Planning and Development (MoPD) to guide Ethiopia's participation in both international and domestic carbon markets, aligning with Article 6 of the Paris Agreement.[57]

[47] Domestic flows relate to climate finance that was raised and spent within the same country. On the other hand, international flows pertain to climate finance flows that were raised in a specific country but spent in another.
[48] Climate Policy Initiative. (2024, October 24). Landscape of Climate Finance in Africa 2024: Interactive Data Tools - CPI. CPI. [Accessed Jan 2025]
[49] Climate Policy Initiative (CPI). (2025, January 27). Landscape of Climate Finance in Ethiopia - CPI. CPI. [Accessed Jan 2025]
[50] This is a significant decline from the 2019/20 provision of US$ 103 million (6% of the total climate finance mobilised then from public sources of US$ 1,556 million).
[51] *Ops cit*
[52] Ops cit
[53] Ops cit.
[54] Ministry of Finance. (2020) A Homegrown Reform Agenda. [Accessed Mar 2025]
[55] UNDP (2019). Operational Manual for Ethiopia's voluntary carbon offset scheme to support composting and urban afforestation activities. [Accessed Mar 2025]
[56] Ethiopia Signs the first Emission Reduction Purchase Agreement (ERPA) with the World Bank. (2023, February). Ministry of Finance. [Accessed Mar 2025]
[57] Ministry of Planning and Development (MoPD) - Ethiopia. (2025, Feb). Ministry has confirmed the National Carbon Market Strategy (NCMS) would position Ethiopia for achieving long-term low-emission Economy development goals [Accessed Apr 2025]

Figure 3: Tracked climate finance in Ethiopia, international vs domestic and public vs private (in millions US$)



Source: Climate Policy Initiative. (2024, October 24). Landscape of Climate Finance in Africa 2024: Interactive Data Tools - CPI.

Private sources are critical in mobilising green and sustainable finance, especially when financing is needed in local currency. Local currency lending has faced limitations due to aversion of most financiers to currency risk and preservation nature to maintain their triple-A credit ratings. This is where private capital can be used via currency derivatives to cover currency risk perceptions. A good example is International Bank for Reconstruction and Development (IBRD)'s issuance of a 9-year local currency loan to Uruguay. The loan was fully hedged by a corresponding Uruguayan peso bond with matching amounts, maturity and payment schedules.[58]

Box 2: Case study on Public-Private Partnership (PPP) models

Other approaches are through Public-Private Partnership (PPP) models such as the Lake Turkana Wind Power Project in Kenya. The project, one of the largest wind farms in Africa, was financed through a mix of equity and debt via the African Development Bank (AfDB), Standard Bank, and the European Investment Bank (EIB) with the government providing land and facilitated the necessary regulatory approvals. While this was not provided as local currency financing, key lessons learned is in the coming together of different partners for a common goal: the government offering guarantees, private investors and equity funds contributing the capital requirements and expertise in project development and management, multilaterals providing long-term loans and guarantees, and risk owners including a consortium of private investors, including KP&P Africa B.V. and Aldwych International.

Ethiopia's PPP model was formalised via an enacted Proclamation No. 1076/2018, recognizing the essential role of the private sector in economic development. Ethiopia has established a legal framework to support the development and implementation of Public-Private Partnership (PPP) projects. Oversight and approval of key project milestones are managed by a dedicated PPP Board, comprising representatives from various ministries and agencies. The PPP Directorate General, within the Ministry of Finance, serves as the secretariat to the PPP Board and is responsible for promoting PPPs, project identification and categorization, policy and guideline establishment, and compliance.[59]

PPP projects in Ethiopia span across multiple sectors, with notable projects in energy, transportation, and water. The country has also implemented pilot PPP initiatives, such as the "Lehulu" project, to showcase the potential of PPPs in public service delivery.

[58] Siritanu, M. (2024, October 16). Sustainable development requires sustainable finance: why local currency financing is part of the solution. Bretton Woods Project. [Accessed Mar 2025]
[59] Public Private Partnership (PPP). (n.d.). [Accessed Apr 2025]

Capacity-building programs are included within the PPP framework to enhance stakeholder skills and knowledge for effective project management and implementation.

Green finance in Ethiopia is a crucial component of the country's strategy to address climate change and promote sustainable development. Ethiopia has been significantly impacted by global warming, which exacerbates existing socio-economic vulnerabilities. To combat these challenges, Ethiopia has implemented several initiatives and strategies:

- **Climate Resilient Green Economy (CRGE) Initiative:** Launched in 2011, this strategy aims to achieve middle-income status by 2025 while ensuring low-carbon growth. It focuses on renewable energy development, forest conservation, and climate-smart agriculture. The strategy is undergoing revisions and updates, now focusing on integrating climate resilience and green growth across sectors and aligns with national development frameworks. The institutional framework has been improved, and Ethiopia's updated NDCs reflect its increased ambition. New financing mechanisms aim to attract investments for a green economy.[60]
- **Long-Term Low Emission and Climate Resilient Development Strategy (2020–2050):** This strategy outlines Ethiopia's long-term vision for a sustainable and resilient economy, emphasizing the need for innovative financing mechanisms.
- Green Legacy Initiative (GLI): A national reforestation program aimed at combating deforestation and soil degradation.

Despite these efforts, Ethiopia faces significant challenges in mobilizing the necessary funds. The country has secured around US$ 400 million in grants from multilateral and bilateral funds over the past decade, but this is far from sufficient against a Nationally Determined Contribution (NDC) of US$ 316 billion (20% unconditional and 80% conditional financing) to achieve an emissions reduction target of 68.8% by 2030.[61] The recent commitment by developed nations to triple climate finance to US$ 300 billion annually by 2035 offers a promising opportunity for Ethiopia.

[60] Federal Democratic Republic Of Ethiopia. (n.d.). The path to sustainable development - Ethiopia's Climate-Resilient Green Economy Strategy.
[61] Ethiopia | NDC Partnership. (n.d.). [Accessed Mar 2025]

2 | Enabling environment assessment

This chapter provides a comprehensive assessment of Ethiopia's green finance policies, examining their strengths, gaps, and opportunities for improving climate finance mobilisation. The assessment is based on four key frameworks: economic and fiscal needs, credit risk profiles, green activity levels, and green finance capabilities for enabling capital markets. These frameworks provide a foundation for understanding the current state of green finance policies, their alignment with national goals, and their effectiveness in mobilising resources to address climate change. The findings will help identify ways to strengthen Ethiopia's green finance framework.

The chapter also highlights the missing regulatory elements for green finance instruments in Ethiopia, defines the roles and responsibilities of various regulators and documents specific high-priority policy actions for the green finance instruments.

2.1 Introduction

Ethiopia has made significant progress in integrating green finance into its development agenda, with the Climate Resilient Green Economy (CRGE) Strategy serving as the cornerstone of its climate policies.[62] The strategy sets ambitious goals for achieving middle-income status while maintaining a low-carbon growth trajectory by mobilising climate finance from both domestic and international sources. Ethiopia's policy framework prioritises renewable energy, sustainable agriculture, and climate-resilient infrastructure, supported by national strategies, investment plans, and sectoral roadmaps aimed at attracting climate finance and implementing sustainable projects.[63]

Despite these efforts, Ethiopia's green finance landscape faces several challenges. Limited private sector participation, weak credit risk mitigation mechanisms, and gaps in monitoring and evaluation hinder the effective mobilisation and utilisation of climate finance. Institutional coordination also remains a challenge, affecting policy coherence and the scalability of green finance initiatives. Strengthening these areas is crucial to unlocking the full potential of climate finance in Ethiopia.

Ethiopia's green finance policies are further shaped by international commitments and public-private partnerships. The country collaborates with multilateral and bilateral donors, climate funds such as the Green Climate Fund (GCF), and development finance institutions to enhance its climate finance capabilities.[64] However, aligning these external resources with national priorities and ensuring efficient fund absorption remain critical challenges.[65] Addressing these structural and policy barriers will be key to sustaining Ethiopia's green finance ecosystem.

2.1.1 Approach

This assessment is structured around four key themes that shape the effectiveness of green finance frameworks: economic and fiscal needs, credit risk profiles, green activity levels, and green finance capabilities for enabling capital markets. Each theme is evaluated using specific criteria to identify policy strengths, gaps, and opportunities. The assessment follows a benchmarking approach, comparing Ethiopia's green finance policies against international good practices.

Table 5: Assessment criteria used for Ethiopia's green finance policy framework

	Evaluation criteria	Description	Assessment parameters
Economic and fiscal needs	**Resource Mobilization Effectiveness**	This theme assesses the volume of climate finance mobilized and the extent to which policies leverage long-term or lower-cost financing options	Capacity for fund absorption, climate finance inflows, funding gaps, and private-sector investments and engagement
	Economic Efficiency	Evaluates the cost-effectiveness of climate finance policies in shaping financial mobilization and their overall economic impact	Cost-benefit analyses, marginal abatement costs, rate of investment return, risk management, Incentive mechanisms and resource allocation efficiency
	Policy Gaps and Opportunities	Identify gaps in policies or strategies that could hinder effective mobilisation of green climate finance	Stakeholder feedback, emerging opportunities like green technologies, unfunded areas, and comparative analyses with other African

[62] Government of Ethiopia. (2011). Climate Resilient Green Economy (CRGE) Strategy. [Accessed Jan 2025]
[63] National Planning Commission. (2020). Ten-Year Development Plan (2021–2030). [Accessed Jan 2025]
[64] GCF (2025). Federal Democratic Republic of Ethiopia. [Accessed Jan 2025]
[65] UNFCCC. (2021). Ethiopia's Nationally Determined Contributions (NDCs). [Accessed Jan 2025]

	Evaluation criteria	Description	Assessment parameters
			countries or global good practices.
Credit risk profiles	**Credit risk assessment measures**	Assess the credit risk assessment measures and policy solutions for addressing credit risk	Disclosure frameworks, credit monitoring, management and risk pricing alternatives
Green activity levels	**Environmental Integrity**	Examines whether policies lead to verifiable reductions in emissions or improvements in adaptation capacities, ensuring they contribute to genuine environmental benefits	Emissions data, land-use metrics, and ecosystem health indicators
	Long-Term Vision, Sustainability and Scalability	Assess how financing plans incorporate long-term sustainability and the extent to which policies empower local governments and communities in implementation	Long-term funding projections, sustainable resource use data, and localisation.
	Monitoring and Evaluation Frameworks	Examines the robustness of systems in place for tracking progress and assessing the outcomes of climate finance initiatives, ensuring accountability and transparency	MRV systems, progress indicators, and reporting transparency
	Equity and Inclusivity	Analyses whether climate finance policies provide equal access to financing opportunities across different stakeholders, promoting inclusivity across gender, regional disparities, and vulnerable groups.	Disaggregated beneficiary data: regional funding distribution and gender-focused metrics
	Adaptation Strategies	Focuses on the effectiveness of policies aimed at enhancing resilience against climate impacts, particularly in vulnerable sectors such as agriculture and infrastructure	Vulnerability assessments, sector-specific adaptation metrics, and regional data
Green finance capabilities for enabling capital markets	**Policy Coherence**	Assesses the alignment and integration of various climate policies within national development strategies, ensuring they work synergistically towards common goals	Alignment of policies, cross-sectoral synergies, and stakeholder coordination
	Institutional Capacity	Evaluates the effectiveness of institutions responsible for implementing climate finance policies, including their ability to engage stakeholders and manage resources efficiently	Staffing levels, inter-agency collaboration, and capacity-building investments

Source: Author

2.2 Policy landscape and regulatory framework in Ethiopia

2.2.1 Economic and fiscal needs

Resource mobilisation effectiveness: fund absorption capacity, climate finance inflows, and funding gaps in Ethiopia

Ethiopia's sustainable development priorities and its climate finance strategy is anchored in Ethiopia's Ten Years Development Plan (2021-2030) and CRGE framework respectively, with the CRGE Facility serving as a key mechanism for blending domestic and international funding sources.[66] Ethiopia's Ten Years Development Plan (2021-2030) and the Climate Resilient Green Economy (CRGE) strategy both emphasize several key priority areas, including agriculture (specifically modernisation and food security, deforestation (promoting sustainable practices), power (with a focus on renewable energy), and transport infrastructure development. Despite efforts to mobilise resources, the country faces significant challenges in fund absorption, particularly at the local level, due to institutional capacity limitations. The lack of comprehensive data and weak institutional frameworks further hinder the effective use of available funds.[67]

To achieve its climate targets, Ethiopia requires up to US$ 300 billion in climate financing by 2030. However, the country has secured only a fraction of this amount, totalling US$ 300 million, with another US$ 280 million in the pipeline.[68, 69] Ethiopia's climate finance landscape is heavily reliant on international public financiers, with 92% of total climate finance coming from

[66] Government of Ethiopia. (2011). Climate Resilient Green Economy (CRGE) Strategy. [Accessed Jan 2025]
[67] Stakeholder KIIs
[68] *Ops cit.*
[69] The Reporter (2024). Ethiopia requires US$ 300 bln to fill climate finance gap by 2030. [Accessed Feb 2025]

international sources. The country attracts an average of US$ 1.7 billion per year, which represents only 7% of its estimated funding needs.[70]

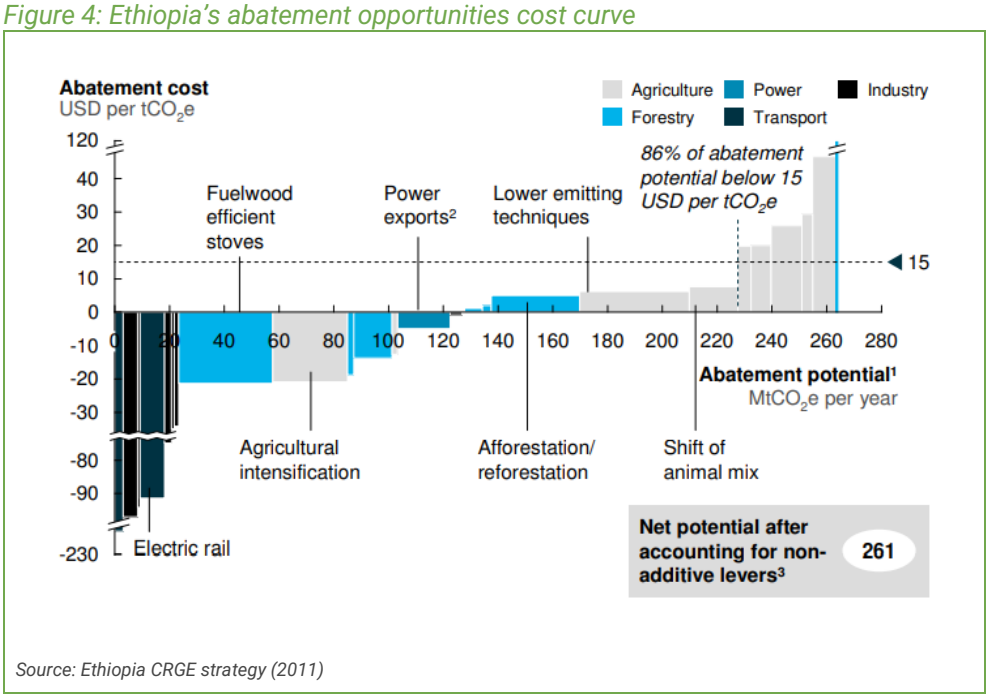
Although the CRGE strategy seeks to leverage private-sector investment, particularly in renewable energy and sustainable agriculture, private-sector participation remains limited. Ethiopia's total financing requirement far exceeds current mobilisation levels, highlighting the urgent need for more effective resource mobilisation strategies such as green bonds, green receivable funds, public private partnerships, innovative financial products such as fintech to support green finance and as well as impact funds and derisking grants. Currently, climate finance covers less than 2% of Ethiopia's GDP, with international donors playing a dominant role.[71]

Economic efficiency: cost-benefit analyses, marginal abatement costs, and investment returns

The economic efficiency of Ethiopia's climate policies is pivotal for its transition to a low-carbon economy. The CRGE strategy utilises cost-benefit analyses to assess the viability of various initiatives, with a strong focus on agriculture, energy, and forestry. The country's marginal abatement cost curve demonstrates the significant investment required in low-carbon technologies, particularly in renewable energy. Investments in wind, hydro, and geothermal energy are expected to yield substantial long-term returns, outweighing the initial capital costs.[72] However, the cost-benefit ratios vary across sectors, with some requiring higher upfront investments. Achieving Ethiopia's net-zero emissions and economic growth targets will require strategic prioritisation of projects that offer the highest economic and environmental returns.

Ethiopia offers a cost-effective opportunity for global greenhouse gas (GHG) emission reduction, with over 80% of its green economy initiatives priced below US$ 15 per ton of CO_2e abated, making it more competitive than many developed economies.[73] Sixteen initiatives have zero or negative abatement costs, making them economically attractive despite high initial investments. A cost analysis by the CRGE initiative shows that 45% of abatement potential comes from these cost-saving measures, while five of the remaining twelve initiatives still fall below the US$ 15 threshold. Ethiopia's low-cost abatement options position it favourably to attract climate finance, with around 55% of total potential concentrated in five key areas: low-emission agricultural techniques, fuelwood-efficient stoves, afforestation/reforestation, yield improvements, and power exports. The total abatement potential, adjusted for overlaps and non-additive effects, stands at approximately 261 Mt CO_2e.[74]

Figure 4: Ethiopia's abatement opportunities cost curve



Source: Ethiopia CRGE strategy (2011)

Trading in carbon credits could reduce the cost of implementing Ethiopia's NDCs, facilitating the removal of GHG emissions. This could be through voluntary markets as exemplified by Tanzania's Yaeda-Eyasi Landscape Project under a community-driven model. The model involves indigenous communities protecting forests and generating carbon credits, with the benefits of carbon credits directly supporting local development.[75] Similarly, Ghana's example of successful engagement in bilateral

[70] *Ops cit.*
[71] *Ibid*
[72] *Ops cit.*
[73] US$ 15 per ton roughly equals the price of carbon credits under the European Trading Scheme in 2011.
[74] *Ops cit.*
[75] Ceccon, M. (2024, December 9). Virtuous Cycle: Rural Tanzanian communities thrive through High-Integrity Carbon Credits. Nature4Climate. [Accessed Apr 2025]

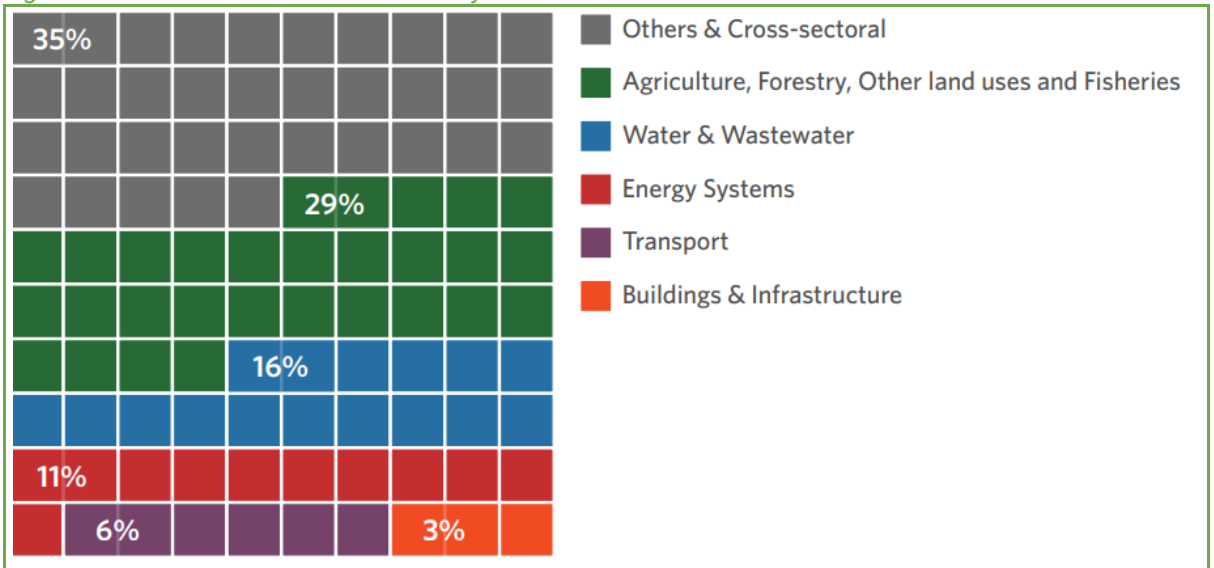
agreements for Internationally Transferrable Mitigation Outcomes (ITMOs) with Switzerland serves as a model for establishing clear and transparent frameworks for international cooperation with dedicated governance to oversee and coordinate ITMOs activities with the Environmental Protection Agency (EPA) and the Ministry of Environment, Science, Technology & Innovation (MESTI).[76] By adopting similar strategies, Ethiopia can enhance its participation in international carbon markets and achieve its climate and development goals.

Economic efficiency in risk management and resource allocation

Effective risk management is essential for ensuring the economic efficiency of Ethiopia's climate investments. Given the high capital costs and uncertainties associated with these projects, a more robust approach to risk mitigation is required.[77] While the CRGE strategy incorporates risk management frameworks, their implementation is inconsistent, particularly at the local level. Risks associated with regulatory uncertainties, technical constraints, and capital-intensive projects necessitate improved financial structuring and policy consistency.

Resource allocation efficiency is another critical factor influencing economic outcomes. Ethiopia has made progress in directing funds toward high-impact sectors like agriculture and forestry, where targeted investments enhance climate resilience and economic growth.[78] However, inefficiencies persist due to bureaucratic hurdles and limited institutional capacity. Addressing these structural challenges will be essential for optimising investment efficiency and ensuring that resources are allocated to projects with the highest economic returns.

Figure 5: Breakdown of climate finance by sectors



Source: CPI (2022) Landscape of Climate Finance in Ethiopia

Maximising economic efficiency in climate investments

The CRGE strategy aims to enhance economic efficiency by applying cost-benefit analysis to climate mitigation and adaptation projects. Despite high marginal abatement costs—particularly in renewable energy—these investments are projected to deliver strong long-term returns. Ethiopia's transition to a net-zero economy is expected to increase GDP growth by 1.4% annually from 2020 to 2050, highlighting the economic benefits of strategic climate investments.[79]

However, inefficiencies in project implementation and regulatory inconsistencies continue to pose challenges. Streamlining approval processes, enhancing technical expertise, and improving risk assessment frameworks are critical to maximising economic returns. By addressing these barriers, Ethiopia can enhance the effectiveness of its climate policies, ensuring both long-term economic and environmental sustainability.

[76] UNDP (2020). Advancing the Paris Agreement through Cooperative Approaches: The Ghana-Switzerland case study. In UNDP NDC Support Programme (p. 14) [Report]. UNDP.
[77] Government of Ethiopia. (2011). Climate Resilient Green Economy (CRGE) Strategy. [Accessed Jan 2025]
[78] Climate Policy Initiative (CPI). (2025, January 27). Landscape of Climate Finance in Ethiopia - CPI. CPI. [Accessed Jan 2025].
[79] World Resources Institute (2023). Ethiopia's Path to Net Zero and Climate Resilient Development: Policies, Costs, and Co-benefits. [Accessed Feb 2025]

Policy gaps and opportunities

Ethiopia's climate policies align with global good practices but face several gaps that impede the effective mobilisation of green climate finance. A stakeholder interview highlighted that the major challenge lies in local-level implementation, where data limitations and institutional capacity constraints prevent accurate planning and decision-making. The lack of comprehensive stakeholder engagement further exacerbates these issues, especially in climate adaptation and mitigation efforts. The absence of capacity-building initiatives for local stakeholders has particularly hindered the effectiveness of climate finance interventions.

Despite these challenges, emerging opportunities in green technologies—such as renewable energy, climate-smart agriculture, and sustainable water management—offer promising avenues for strengthening Ethiopia's climate finance strategy.[80] These sectors hold substantial potential for both domestic and international investment. However, funding for areas like climate-smart agriculture and water management remains inadequate, jeopardising Ethiopia's long-term climate resilience. Strengthening private-sector engagement and incentivising investment in these sectors will be key to overcoming financing gaps.

While Ethiopia's approach is ambitious, comparisons with other African nations highlight the need for more robust implementation frameworks. Between 2011 and 2021, East Africa mobilised approximately $44 billion in climate finance, with Ethiopia ranking among the top five recipients.[81] Yet, Ethiopia secured only 7% of its estimated US$25.3 billion annual climate finance needs in 2019/2020—equivalent to less than 2% of its GDP—underscoring a substantial financing gap.[82] Ethiopia's reliance on international public financing, such as the $227.4 million committed by the Green Climate Fund (GCF) and over $130 million from the Global Environment Facility (GEF), highlights the need for more diversified financing mechanisms.[83] Private-sector participation remains minimal, with only 14% of Africa's $29.5 billion climate finance in 2020 coming from private sources, and Ethiopia reflects this broader trend.[84] To unlock greater opportunities for green finance, Ethiopia must enhance risk management strategies to attract private investment and develop policies that are adaptable to local contexts. Incorporating participatory processes involving communities and businesses will be crucial to building a more resilient, low-carbon economy.

Strengthening stakeholder engagement and enhancing green technologies

The integration of stakeholder feedback into policy development is a critical component of Ethiopia's climate strategy. The CRGE strategy promotes participatory approaches involving government agencies, NGOs, the private sector, and local communities. However, there remain gaps in local-level stakeholder engagement, limiting the effectiveness and ownership of climate policies. Strengthening participatory planning processes and ensuring better representation of local communities and grassroots organisations will enhance the sustainability of climate finance interventions.

Renewable energy technologies, particularly solar and wind power, represent a significant growth opportunity for Ethiopia's climate strategy.[85] Despite the country's considerable potential, financing challenges and underdeveloped infrastructure have slowed progress. To accelerate the adoption of green technologies, Ethiopia must prioritise investment in research and development, coupled with stronger policy frameworks that foster innovation. Advancing these technologies can drive sustainable economic growth while addressing key environmental challenges, including emissions reduction and energy access.

Some examples of pilot projects in Ethiopia that focus on strengthening stakeholder engagement and enhancing green technologies include

1. **Watershed Development Guidelines:** This project assessed the community-based participatory watershed development guidelines as part of Ethiopia's CRGE strategy. It focused on involving local communities in the planning and implementation of watershed management practices to enhance climate resilience.[86]
2. **Enhanced Management and Enforcement of Protected Areas (EMPAS):** The EMPAS project aimed to improve the management and enforcement of Ethiopia's protected areas, such as Omo, Mago, Chebera Chuchura, and Kafta Shiraro National Parks, as well as the Babille Elephant Sanctuary. This project involved local communities in conservation efforts to protect biodiversity and combat environmental threats.[87]

[80] *Ops cit.*
[81] UNDP (2025). Financing Ethiopia's Green Transition. [Accessed Feb 2025]
[82] *Ops cit.*
[83] Climate Finance Pathfinder (2020). Ethiopia Report. [Accessed Feb 2025]
[84] AfDB (2023). Africa: Climate finance facing global macroeconomic challenges; time for private sector support. [Accessed Feb 2025]
[85] AfDB (2023). Africa: Climate finance facing global macroeconomic challenges; time for private sector support. [Accessed Feb 2025]
[86] Initiative for Climate Action Transparency. (2024, June 3). Pilot Projects - ICAT. ICAT. [Accessed Mar 2025]
[87] Documenting good practices for three climate projects. (2022, August). UNDP. [Accessed Mar 2025]

3. **Scaling Up the Green Legacy Initiative (GLI):** This initiative focused on enhancing the climate resilience of smallholder farmers and disadvantaged groups by scaling up good practices from the Green Legacy Initiative. It promoted ecosystem-based adaptation and involved local stakeholders in the implementation process.[88]

These pilot projects demonstrate the importance of involving local communities and stakeholders in climate resilience efforts and the adoption of green technologies.

While Ethiopia's climate finance strategy has made strides, several critical sectors remain underfunded, including sustainable agriculture, rural electrification, and climate-smart water management. Addressing these funding gaps will be essential to ensuring that climate finance reaches vulnerable communities, particularly in rural areas. At the same time, focusing on these sectors offers an opportunity to enhance private-sector participation, fostering new technologies and services that can strengthen Ethiopia's climate resilience.

Comparative analysis and integrating lessons from other countries

Globally, countries have demonstrated varying degrees of success in mobilising climate finance and ensuring effective fund absorption. Successful examples from Africa and Latin America provide valuable lessons for Ethiopia to enhance climate finance strategies.

Kenya's effective climate finance mobilisation: Kenya has excelled in attracting international climate finance, driven by its National Climate Change Action Plan (NCCAP).[89] The country's success is largely attributed to its clear sectoral priorities, robust institutional frameworks,[90] and well-defined policies that ensure efficient fund absorption. Kenya's emphasis on public-private partnerships has been pivotal in driving investments, particularly in geothermal and wind energy projects. The active involvement of the private sector has been crucial in scaling up renewable energy initiatives, demonstrating the importance of fostering a conducive environment for private investment in climate action.

Tanzania's strengthened institutional coordination: Although Tanzania still faces funding gaps, its National Climate Change Response Strategy (NCCRS) has been instrumental in strengthening institutional coordination, improving fund allocation, and facilitating better project implementation.[91] This improved coordination has led to more effective use of available climate finance, although there remains a need for increased private-sector engagement and enhanced domestic resource mobilisation to meet the country's growing climate financing needs.

In Latin America, both Chile and Brazil serve as strong examples of diversified financing mechanisms for climate action. Chile has successfully integrated international and domestic funding sources to support transformative projects in the energy, transport, and agriculture sectors.[92] This approach has enhanced the country's sustainability and economic resilience by combining public and private investments in green sectors.

Brazil has leveraged mechanisms like the Green Climate Fund (GCF) while encouraging robust private-sector participation, particularly in renewable energy and sustainable agriculture. The country's dynamic private-sector involvement, driven by incentives such as feed-in tariffs and tax breaks for renewable energy projects, has been central to its success in scaling up green investments.[93]

Under carbon markets, Tanzania's Yaeda-Eyasi Landscape Project under a community-driven model and Ghana-Switzerland ITMOs cooperation agreement are good examples of credit trading opportunities. South Africa's experience with carbon tax and compliance markets offers several valuable lessons for Ethiopia: (1) introduction of a Carbon Tax Act in 2019 designed to reduce GHG emissions by imposing a tax on the carbon content of fossil fuels; (2) Hybrid carbon tax system that combines a direct carbon tax with offset allowances allowing companies to use carbon offsets to meet a portion of their tax liability, encouraging investment in local carbon offset projects; and (3) recycling the revenue generated from the carbon tax to fund various climate change mitigation and adaptation projects.[94]

Private-sector engagement has played a pivotal role in the success of climate finance mobilisation in several countries. In Kenya the creation of enabling environments through supportive policies and incentives has attracted significant private investment in renewable energy and climate-smart agriculture. Kenya has focused on public-private partnerships, which have

[88] Ethiopia climate projects - Climate Project Explorer. (n.d.). [Accessed Mar 2025]
[89] Ministry of Environment and Forestry (2018). National Climate Change Action Plan (NCCAP) 2018-2022. [Accessed Feb 2025]
[90] Robustness of frameworks and policies can be indicated from legislative oversight mechanisms including post-legislative scrutiny, clarity and timeliness with which the government communicates its legislative agenda to parliament, reporting requirements, institutional capacity and stakeholder engagement.
[91] Vice President Office (2021). National Climate Change Responses Strategy 2021-2026. [Accessed Feb 2025]
[92] APC Colombia. Innovative development finance mechanisms in Colombia: A study for the future.https://www.apccolombia.gov.co/sites/default/files/2024-09/VF_Innovative%20development%20finance.pdf [Accessed Feb 2025]
[93] Climate Bonds Initiative (2019. Green Infrastructure Investment Opportunities. https://www.climatebonds.net/files/reports/cbi_giio_2019_02c_0.pdf [Accessed Feb 2025]
[94] VUKA Group. (2025, February 20). A South African perspective on emission reduction systems. [Accessed Apr 2025]

facilitated substantial private-sector involvement, especially in geothermal and wind energy projects.[95] In Latin America, Brazil's long-standing incentives for renewable energy have driven strong private-sector participation, with feed-in tariffs and tax breaks playing a key role.[96, 97] Similarly, Colombia has attracted private investment through clear regulatory frameworks and strong institutional support, particularly in renewable energy and sustainable transport sectors.[98, 99]

Strategic use of cost-benefit analysis has further strengthened the effectiveness of climate strategies in several countries. In Kenya, the NCCAP integrates marginal abatement cost curves to prioritise low-cost, high-impact mitigation measures.[100] This approach helps guide investments toward sectors that offer the greatest returns in terms of both environmental and economic benefits. In Latin America, Colombia's net-zero strategy employs detailed cost-benefit assessments to guide investments in energy and transport sectors, ensuring that resources are allocated to projects that deliver both environmental and economic gains.[101] Brazil's existing renewable energy infrastructure has allowed for the cost-efficient scaling of clean energy, with strong risk management frameworks helping to attract both international and private investors.

2.2.2 Credit risk profiles

Ethiopia's CRGE strategy is designed to address climate change risks while promoting sustainable development.[102] A key aspect of this strategy is the comprehensive approach to credit risk assessment, which includes disclosure frameworks, credit monitoring, risk management, and pricing alternatives. These elements are crucial for ensuring sustainable green finance. While the CRGE strategy emphasizes transparency in financial flows and project outcomes, challenges persist in effectively implementing these frameworks, particularly due to institutional capacity constraints at the local level. Local institutions lack the necessary resources, expertise, or infrastructure to carry out the CRGE initiatives effectively. These gaps hinder data collection and utilization, ultimately affecting informed decision-making and planning.

Disclosure frameworks in Ethiopia's climate finance

Ethiopia's CRGE strategy incorporates climate finance transparency through the CRGE Facility, a national mechanism designed to mobilize and blend both domestic and international funding.[103] Stakeholder interviews have indicated that while the strategy aligns with global disclosure standards, its practical enforcement remains inconsistent due to institutional constraints and gaps in local level. These limitations impede the effective assessment of credit risk, which in turn reduces investor confidence and undermines the ability to make informed financial decisions.

Despite Ethiopia's commitment to participatory planning at the district level, the lack of comprehensive risk disclosure frameworks weakens financial oversight. Stakeholder interviews also highlighted challenges such as inadequate technological infrastructure and limited institutional capacity, which further hinder the implementation of robust monitoring systems. Addressing these gaps is essential to enhancing the credibility of Ethiopia's green finance initiatives, ensuring long-term sustainability, and attracting investment in climate-resilient projects.

Credit monitoring and management

Ethiopia's credit risk profile has deteriorated significantly, as evidenced by recent assessments from major credit rating agencies such as S&P and Fitch. Fitch upgraded Ethiopia's Long-Term Local-Currency (LTLC) Issuer Default Rating to 'CCC+' due to eased financing pressures but maintained a "Restricted Default" (RD) rating on its Long-Term Foreign-Currency (LTFC) obligations, reflecting ongoing defaults on external debt, including its Eurobond.[104] Despite efforts to stabilise macroeconomic imbalances, such as exchange rate reforms and market-based monetary policies, Ethiopia's broader debt crisis remains

[95] FAPA (2020). Public-Private Partnerships in Transmission Lines Kenya. https://www.afdb.org/sites/default/files/documents/projects-and-operations/kenya_-_public-private_partnerships_in_transmission_lines_technical_assistance_request_-_technical_assistance_request.pdf [Accessed Feb 2025]
[96] ECLAC (2020). Incentive mechanisms for clean energy innovation in Brazil Paths for an energy big push. https://repositorio.cepal.org/server/api/core/bitstreams/1de5cebb-d71b-40be-9bfd-8ae7ad21f682/content [Accessed Feb 2025]
[97] EIB (2023). Brazil: EIB grants €200 million to Sicredi for SMEs and solar energy investment by households. https://www.eib.org/en/press/all/2023-215-brazil-eib-grants-eur200-million-to-sicredi-for-smes-and-households-solar-energy-investments [Accessed Jan 2025]
[98] WEF (2024). Mobilizing Clean Energy Investments in Colombia: Community Solutions to Help Accelerate Financing. https://www3.weforum.org/docs/WEF_Mobilizing_Clean_Energy_Investments_in_Colombia_EN_2024.pdf [Accessed Jan 2025]
[99] Climate Investment Finds (2023). Green light for Colombia on renewable energy integration funding. https://cif.org/news/green-light-colombia-renewable-energy-integration-funding [Accessed Feb 2025]
[100] SEI (2009). Economics of Climate Change Kenya. https://assets.publishing.service.gov.uk/media/57a08b3eed915d3cfd000c0a/60871-kenya-climatechange1.pdf [Accessed Feb 2025]
[101] Arguello, R., Delgado, R., Espinosa Valderrama, M., González, T., & Sandoval, J. M. (2022). *Cost-benefit analysis of options to achieve net-zero emissions in Colombia*. https://publications.iadb.org/en/cost-benefit-analysis-options-achieve-net-zero-emissions-colombia [Accessed Feb 2025]
[102] Government of Ethiopia. (2011). Climate Resilient Green Economy (CRGE) Strategy. [Accessed Jan 2025]
[103] *Ops cit.*
[104] A&P Global (2024). Ethiopia Long-Term Local Currency Rating Raised To 'CCC+'; Outlook Stable; Foreign Currency Rating Affirmed At 'SD'. [Accessed Feb 2025]

unresolved.[105] International credit agencies continue to express concerns about Ethiopia's ability to meet its foreign debt obligations, particularly amid ongoing restructuring talks under the G20's Common Framework.

To counter the limitations of existing international assessments, the African Union (AU) plans to launch its own credit rating agency, which will provide more nuanced evaluations of African nations' creditworthiness, giving Africa a stronger voice in the global financial system.[106]

Ethiopia's CRGE strategy includes mechanisms to monitor credit risks, particularly in the agriculture and energy sectors, through the CRGE Facility. This national financial mechanism supports the continuous assessment of financial flows and project impacts by blending domestic and international funding. Stakeholder interviews highlighted that limitations in data accuracy, technological infrastructure, and institutional capacity hinder the effective monitoring of climate-related credit risks. While national policies integrate climate risk assessments into planning processes, the absence of a comprehensive credit risk management framework restricts proactive responses to financial vulnerabilities.

Strengthening institutional capacity remains a long-term objective, as the strategy relies on existing government bodies for implementation. Efforts by the Ministry of Planning and Development (MoPD) to strengthen local government capabilities are ongoing but face challenges due to resource constraints and capacity gaps at both the institutional and expert levels. Developing robust credit monitoring systems is crucial for ensuring transparency, improving risk evaluation, and enhancing investor confidence in climate finance projects. Addressing these structural weaknesses is essential to align Ethiopia's climate finance practices with international standards and support sustainable development goals.

Risk pricing alternatives and financial instruments

Ethiopia is gradually developing its green finance landscape by exploring innovative financial instruments such as green bonds, climate risk insurance, and carbon credits.[107] These mechanisms aim to mitigate climate-related financial risks and attract long-term investment. However, their adoption remains in its early stages, facing structural challenges exacerbated by macroeconomic instability, the lingering effects of the COVID-19 pandemic, and internal conflicts. These constraints have limited the country's ability to scale risk-based financial products and integrate them effectively into the broader financial system.

To enhance climate finance resilience, Ethiopia must strengthen its risk pricing mechanisms and develop comprehensive credit risk management frameworks. While the CRGE strategy includes insurance schemes and risk-sharing models to protect investments in renewable energy and sustainable agriculture, gaps remain in implementing robust credit risk management practices. Addressing these shortcomings through policy refinement, institutional capacity-building, and investor incentives will be crucial for advancing Ethiopia's green finance agenda and fostering a more stable investment environment.

Box 3: Case study on de risking investments in Ethiopia

InfraCo Africa is actively involved in advancing renewable energy projects across Africa, with notable initiatives in Ethiopia and Southern Africa.[108]
Corbetti Geothermal Project in Ethiopia: The Corbetti Geothermal project, located approximately 250 km south of Addis Ababa in the Corbetti Caldera, is set to be one of Ethiopia's first privately developed, owned, and operated geothermal Independent Power Producers (IPPs). This pioneering project aims to harness geothermal energy from a greenfield site, contributing significantly to the country's renewable energy capacity. InfraCo Africa, in partnership with Berkeley Energy, has committed up to $30 million in equity investment to support the development of up to 70 MW of geothermal power. The project is planned to be developed in phases over a six-year period.[109]

Source: InfraCo Africa & GuarantCo

Comparative analysis and integrating lessons from other countries

[105] Fitch Ratings (2024). Fitch Upgrades Ethiopia's LTLC IDR to 'CCC+'; Affirms LTFC IDR at 'RD'. [Accessed Feb 2025]
[106] African Union (2025). African leaders convene on establishment of homegrown solution. The Africa Credit Rating Agency. [Accessed Feb 2025]
[107] UNDP (2025). Ethiopia's Green Finance and Energy Landscape Takes Center Stage at Annual Development Conference. https://www.undp.org/ethiopia/press-releases/ethiopias-green-finance-and-energy-landscape-takes-center-stage-annual-development-conference [Accessed Feb 2025]
[108] InfraCo Africa (2018). InfraCo Africa increases its commitment to US$30 million for Ethiopia's first private geothermal project. [Accessed Feb 2025]
[109] InfraCo Africa. Ethiopia: Corbetti Green growth powered by the earth's core. [Accessed Feb 2025]

Countries across Africa, Asia, and Latin America provide valuable insights that can strengthen Ethiopia's credit risk profiling for climate finance. Kenya and Ghana offer examples of robust disclosure frameworks that promote transparency in climate-related financial risks, supported by legislative backing such as Kenya's Climate Change Act and Ghana's Bank of Ghana Climate-Related Financial Risk Directive.[110, 111] These frameworks not only ensure clear reporting standards but also integrate climate risk into financial sector practices. Ethiopia could adopt similar legal mandates to standardise climate risk disclosures across sectors, enhancing its ability to attract climate finance by signalling transparency and accountability to investors.

In terms of credit monitoring and management, Colombia highlights the importance of integrating advanced data collection and analysis tools into credit risk frameworks. Colombia integrates climate risk assessments into its budgetary processes.[112] Ethiopia could benefit from embedding similar systems, linking credit monitoring to national fiscal planning. This would enable proactive management of climate-related risks, ensuring financial flows are directed toward sustainable projects. Such integration would enhance the country's credit risk profile and foster resilience against climate-induced economic shocks.

Risk pricing innovations from countries like Brazil and Chile provide models for diversifying Ethiopia's financial instruments. Brazil's success with green bonds and carbon credits, alongside Chile's use of climate risk insurance and public-private partnerships, demonstrates how diverse risk pricing tools can strengthen market confidence and attract investment.[113] Ethiopia could explore these mechanisms, tailoring them to local contexts, to mitigate climate-related financial risks and develop a dynamic green finance market. Implementing these tools would position Ethiopia as a competitive player in global climate finance, improving its overall credit risk profile while driving sustainable economic growth.

2.2.3 Green activity levels

Environmental Integrity

Ethiopia's CRGE strategy is designed to limit greenhouse gas (GHG) emissions to 150 Mt CO2e by 2030, aligning emissions with 2010 levels.[114] This target represents a significant reduction compared to the business-as-usual scenario, achieved through initiatives such as reforestation, afforestation, and the expansion of renewable energy. Emissions data are vital for tracking the effectiveness of these policies and ensuring that they align with national and international climate commitments. Furthermore, land-use metrics, including deforestation rates and improvements in agricultural efficiency, provide insights into how Ethiopia's strategies contribute to carbon sequestration and sustainable land management.

Ecosystem health indicators are integral to assessing environmental integrity. Ethiopia's strategy incorporates biodiversity conservation and sustainable forest management to enhance ecosystem resilience. Monitoring indicators like soil health, water availability, and species diversity allows policymakers to assess the broader ecological impact of climate interventions. These indicators not only measure the success of mitigation strategies but also identify areas requiring further attention. Together, emissions data, land-use metrics, and ecosystem health indicators ensure that Ethiopia's CRGE strategy delivers verifiable environmental benefits.

Long-Term Vision, Sustainability, and Scalability

Ethiopia's CRGE strategy aims to achieve middle-income status by 2025 while maintaining low-emissions growth.[115] Achieving this requires long-term financial projections to ensure sustained investment in climate initiatives. The strategy estimates that US$ 66.98 billion will be required by 2050 to reach net-zero emissions. Monitoring financial flows and investment trends provides insights into the feasibility and effectiveness of financing mechanisms. Additionally, data on sustainable resource use is essential for evaluating whether key sectors—such as energy and agriculture—are progressing towards low-carbon development pathways.

Localisation is another key component of sustainability and scalability. Ethiopia's CRGE framework needs to be tailored to regional contexts, ensuring that adaptation and mitigation efforts align with local climate vulnerabilities. Data on regional implementation, such as decentralised renewable energy projects and climate-smart agricultural practices, help assess the

[110] Central Bank of Kenya (2024). Issuance of the Draft Climate Risk Disclosure Framework for the Banking Sector. https://www.centralbank.go.ke/uploads/press_releases/378456919_Public%20Notice%20-%20Issuance%20of%20the%20Draft%20Climate%20Risk%20Disclosure%20Framework%20for%20the%20Banking%20Sector.pdf [Accessed Feb 2025]
[111] Benrsi-Enchill (2025). Bank of Ghana issues the Climate-Related Financial Risk Directive. https://bentsienchill.com/bank-of-ghana-issues-the-climate-related-financial-risk-directive/ [Accessed Feb 2025]
[112] Colombian National Planning Department (DNP) (2020). Starting point and Sustanablity of Colombia's Climate finance MRV. https://alianzapacifico.net/assets/gallery/MRV_of_Climate_Finance_in_Colombia.pdf. [Accessed Feb 2025]
[113] Alexandre Spadeto (2023). Opportunities for private capital in Brazil's growing carbon credit market. https://www.tmf-group.com/en/news-insights/articles/fund-formation-administration/brazil-carbon-credit-market/[Accessed Feb 2025]
[114]Government of Ethiopia. (2011). Climate Resilient Green Economy (CRGE) Strategy. [Accessed Jan 2025]
[115] *Ops cit.*

extent of localisation. By embedding climate policies within local governance structures and ensuring adequate funding, Ethiopia strengthens the long-term sustainability and scalability of its green initiatives.

Monitoring and Evaluation Frameworks

The effectiveness of Ethiopia's climate policies depends on the robustness of its monitoring, reporting, and verification (MRV) systems. Ethiopia is developing an MRV framework to track progress in emissions reductions, reforestation efforts, and adaptation measures. This system is designed to align with international good practices, allowing for the verification of climate action outcomes. However, data gaps at local levels remain, necessitating further refinement in reporting structures to improve accuracy.

Progress indicators play a key role in assessing the effectiveness of climate policies. Ethiopia's CRGE strategy includes indicators for emission reductions, reforestation success, and the adoption of energy-efficient technologies. The presence of clear, measurable targets ensures that policymakers and stakeholders can track achievements and adjust strategies accordingly. Additionally, reporting transparency is integral to attracting international climate finance, as it provides confidence to investors and development partners regarding Ethiopia's commitment to sustainable growth.

Equity and Inclusivity

Ensuring equal access to climate finance and benefits is a fundamental objective of Ethiopia's CRGE strategy.[116] Disaggregated beneficiary data, including gender-focused metrics and regional funding distribution, are essential for assessing inclusivity. The strategy allocates funding based on regional vulnerabilities, ensuring that resources are directed to the areas most affected by climate change. However, more structured gender-focused metrics are needed to evaluate the impact of climate interventions on women and other vulnerable groups.

Data on regional funding distribution highlights disparities in the allocation of climate finance. Ethiopia's approach directs funds to regions with the highest climate risks, particularly in agriculture-dependent communities. This ensures that adaptation and mitigation efforts extend beyond urban areas to rural populations that are more vulnerable to climate shocks. Strengthening data collection on inclusivity will help policymakers design more equitable and socially sustainable interventions.

Adaptation Strategies

Ethiopia's adaptation strategies focus on enhancing resilience in key sectors such as agriculture, water, and infrastructure.[117] Vulnerability assessments are critical in identifying climate risks at national and regional levels. Ethiopia's National Adaptation Plan (NAP) incorporates detailed assessments to guide policy decisions and prioritise investments in climate resilience.[118] By systematically tracking vulnerability indicators, Ethiopia can allocate resources more effectively and measure the success of adaptation initiatives.

Sector-specific adaptation metrics provide detailed insights into how various sectors are adjusting to climate change. Ethiopia's CRGE strategy includes tailored adaptation measures for agriculture, water management, energy and transportation sectors.[119] Regularly updating and analysing regional climate data ensures that adaptation efforts remain responsive to evolving climate conditions. Ultimately, by strengthening vulnerability assessments and sector-specific adaptation metrics, Ethiopia enhances its ability to withstand climate shocks and build long-term resilience.

Comparative analysis and integrating lessons from other countries

Kenya's approach to climate policy offers Ethiopia valuable lessons in comprehensive planning and robust implementation. The National Climate Change Action Plan (NCCAP) stands out with its sector-specific targets for emissions reduction, renewable energy, and inclusive climate action.[120] The success of Kenya's geothermal and wind sectors highlights the impact of focusing on high-potential renewables, while its advanced Monitoring, Reporting, and Verification (MRV) systems ensure transparency and accountability. Notably, Kenya integrates gender-focused metrics and regional funding allocations, ensuring equitable access and benefits. This demonstrates how inclusivity can be directly embedded into policy frameworks.

Uganda and Tanzania underscore the importance of regional tailoring and cross-sectoral synergies in climate strategies. Uganda focuses on local adaptation, protecting wetlands and forests as key resilience assets, while its integrated MRV system boosts transparency and coordination. Detailed funding projections clarify adaptation and mitigation costs, offering a model

[116] Government of Ethiopia. (2011). Climate Resilient Green Economy (CRGE) Strategy. [Accessed Jan 2025]
[117] Government of Ethiopia (2019). Ethiopia's Climate Resilient Green Economy National Adaptation Plan. [Accessed Jan 2025]
[118] *Ops cit.*
[119] *Ops cit.*
[120] Government of the Republic of Kenya (2018). National Climate Change Action Plan 2018-2022. [Accessed Jan 2025]

Ethiopia could replicate.[121] Tanzania's National Climate Change Response Strategy (NCCRS) complements this by emphasising scalable, sector-wide adaptation across agriculture, water, and forestry. Its strong focus on sustainable land use and afforestation provides a blueprint for balancing economic growth with conservation.[122] Collectively, these approaches highlight how Ethiopia's CRGE strategy could benefit from deeper regional tailoring, diversified scalable projects, and clearer funding frameworks.

Colombia offers valuable insights into setting high-ambition emissions reduction targets, backed by strong MRV systems. With a 51% emissions reduction goal by 2030 and net zero by 2050, Colombia pairs ambition with robust monitoring that enhances transparency and stakeholder coordination.[123] Its localised adaptation plans, focused funding priorities, and gender inclusivity further strengthen its approach. Colombia's emphasis on sustainable agriculture and ecosystem health—particularly wetlands and forests—demonstrates how environmental integrity can drive both mitigation and adaptation. Ethiopia could adopt similar land-use practices to bolster ecosystem resilience and climate outcomes.

India's bold climate strategy effectively balances rapid economic growth with aggressive mitigation goals. The National Action Plan on Climate Change (NAPCC) guides India's efforts, with a 500 GW renewable energy target by 2030—200 GW already achieved—helping decouple emissions from growth.[124, 125] Current policies are expected to cut nearly 4 billion tonnes of CO_2 between 2020 and 2030, while India maintains one of the lowest per capita emissions among major economies.[126] Its commitment to net-zero by 2070, backed by comprehensive policies and ambitious renewable targets, offers key lessons for Ethiopia on aligning development with sustainability.[127]

2.2.4 Green finance capabilities for enabling capital markets

Policy Coherence

Ethiopia's CRGE strategy demonstrates notable policy coherence through its integration into the ten-years development plan and national Growth and Transformation Plan (GTP).[128] This alignment ensures that climate objectives are embedded within Ethiopia's broader development goals, promoting a unified approach to sustainable growth. The CRGE's four pillars—agriculture, deforestation, power, and transport—are structured to align with national economic priorities while addressing climate resilience.[129, 130, 131] This integration fosters consistency across planning documents, creating a streamlined policy framework that reduces conflicts between development and climate agendas.

Furthermore, the NCMS builds on existing initiatives such as the GLI, NDC, and tCRGE strategy. This coherence is also mainstreamed across sectors through incorporation of sectoral policies related to non-motorized transport, electrification programs, biogas, clean cooking, and irrigation. NCMS will see implementation of various market mechanisms such as the CDM, voluntary carbon markets, and bilateral cooperation under the Joint Crediting Mechanism as well as financial instruments and incentives to support carbon market projects and attract investment.[132]

Cross-sectoral synergies are another cornerstone of Ethiopia's policy coherence. The CRGE strategy actively promotes collaborative efforts between key sectors such as agriculture, energy, and forestry to enhance climate resilience and green growth. For instance, investment in renewable energy supports agricultural productivity by ensuring reliable power, while forestry initiatives combat deforestation, protecting water resources crucial for farming.[133] These interlinked policies generate a multiplier effect, optimising resource use across sectors and enhancing overall sustainability outcomes.

Stakeholder coordination further reinforces policy coherence within Ethiopia's CRGE framework. The establishment of the CRGE Facility has been instrumental in unifying diverse stakeholders, including government agencies, the private sector actors, civil society, and international partners. This institutional mechanism not only facilitates the mobilisation of domestic and international climate finance but also ensures synchronised implementation efforts. Regular consultations and collaborative

[121] UNEP (2021). Ugandan wetlands protect communities from climate change, says the government. [Accessed Feb 2025]
[122] United Republic of Tanzania (2021). National Climate Change Strategy (NCCS) 2012-2018. [Accessed Feb 2025]
[123] WWE (2020). Colombia pledges to reduce its GHG emissions by 51% by 2030. [Accessed Feb 2025]
[124] Ministry of Power (2023). 500GW Nonfossil Fuel Target. [Accessed Feb 2025]
[125] Government of India (2021). National Action Plan on Climate Change (NAPCC). [Accessed Feb 2025]
[126] CEEW (2024). India's current climate policies significant; will reduce ~4 billion tonnes of CO2 emissions between 2020 & 2030. [Accessed Feb 2025]
[127] Aibhav Chaturvedi *et al* (2024). India's pathway to net zero by 2070: status, challenges, and way forward. [Accessed Feb 2025]
[128] MoPD (2020). Ten Years Development Plan: A Pathway of Prosperity (2021-2030). [Accessed Jan 2025]
[129] Ministry of Transport. Ethiopia's Climate Resilient Transport Sector Strategy. [Accessed Jan 2025]
[130] Government of Ethiopia. Ethiopia's Climate Resilient Green Economy: Agriculture and Forestry. [Accessed Jan 2025]
[131] Government of Ethiopia. Ethiopia's Climate-Resilient Green Economy: Climate Resilience Strategy: Water and Energy. [Accessed Jan 2025]
[132] Ministry of Planning and Development (MoPD) - Ethiopia. (2025, Feb). Ministry has confirmed the National Carbon Market Strategy (NCMS) would position Ethiopia for achieving long-term low-emission Economy development goals [Accessed Apr 2025]
[133] *Ops cit.*

planning sessions foster transparency and collective ownership, which are essential for executing complex climate initiatives effectively.

Institutional Capacity

Ethiopia's institutional capacity for implementing its CRGE strategy is characterised by a multi-layered governance structure involving numerous ministries and agencies.[134] Dedicated climate action units have been established within key institutions such as the Ministry of Finance and the Ministry of Planning and Development. However, stakeholder interviews indicate that capacity gaps persist, particularly at the local government level, where limited human resources and technical expertise hinder effective project implementation and monitoring. To address these challenges, the government has demonstrated a commitment to strengthening institutional capacity by forming a federal-level committee, chaired by the Ministry of Planning and Development, to track progress.

Inter-agency collaboration is central to Ethiopia's approach to managing climate finance and executing the CRGE strategy. The CRGE Facility plays a pivotal role in fostering cooperation among various governmental bodies, ensuring that sectoral policies and projects are harmonised. Ministries responsible for agriculture, energy, forestry, and transport work collaboratively within a coordinated framework that encourages joint planning and resource sharing.

In addition, market-based institutions ECMA and the Ethiopian Securities Exchange (ESX) are actively working to promote sustainability good practices and issuance through their regulatory and market guidelines. For instance, ECMA has established comprehensive guidelines to ensure that market participants adhere to sustainability standards; this includes the ESX Rulebook, which outlines the rules and procedures for securities trading, membership requirements, and listing regulations. On the other hand, ESX has implemented trading rules and fair market guidelines designed to promote transparency, fairness, and integrity in the capital market. Furthermore, ECMA and ESX are involved in workshops and collaborations aimed at understanding and promoting green, social, and sustainability financing opportunities in Ethiopia. Nonetheless, challenges remain, particularly in ensuring consistent collaboration at sub-national levels, where institutional silos can impede integrated climate action.

Investments in capacity-building are crucial for strengthening Ethiopia's institutional framework for green finance. Stakeholder interviews highlight that the MoPD recognises existing skill gaps and has prioritised training programmes to enhance the technical expertise of public officials and other stakeholders involved in climate initiatives. These programmes focus on climate finance management, project design, and monitoring and evaluation, equipping staff with the necessary competencies to implement the CRGE effectively. Additionally, technical assistance and knowledge-sharing platforms support continuous learning and institutional strengthening, fostering a more resilient and capable governance framework.

Comparative analysis and integrating lessons from other countries

Kenya and Uganda illustrate how strong policy alignment and institutional capacity can drive impactful climate action. Kenya's National Climate Change Action Plan (NCCAP) aligns seamlessly with national development goals, setting sector-specific targets like climate-smart agriculture and disaster risk management.[135] The Carbon Credit Trading and Benefit Sharing Bill (2023) strengthens Kenya's institutional framework, regulating carbon credit issuance and benefit-sharing, which fosters cross-sectoral synergies and boosts investor confidence.[136] Uganda embeds climate action into its Vision 2040 and National Development Plan, ensuring a cohesive national agenda.[137] Its Climate Change Department promotes inter-agency collaboration across sectors such as agriculture, water, and energy, while targeted capacity-building initiatives improve institutional effectiveness and policy execution.

Brazil prioritises reducing deforestation, particularly in the Amazon, alongside promoting renewable energy. Rigorous law enforcement and international cooperation have significantly curbed deforestation, aligning national policies with global climate goals, including Brazil's commitment to climate neutrality by 2050.[138, 139] Chile's Framework Law on Climate Change and Long-Term Climate Strategy (LT-LEDS) institutionalises climate considerations across sectors, fostering synergies in agriculture, energy, and water.[140] Chile also excels in stakeholder coordination, engaging government agencies, the private sector, and civil society while investing in capacity-building to strengthen climate governance.

[134] Government of Ethiopia. (2011). Climate Resilient Green Economy (CRGE) Strategy. [Accessed Jan 2025]
[135] Government of the Republic of Kenya (2018). National Climate Change Action Plan 2018-2022. [Accessed Jan 2025]
[136] Parliament of Kenya (2023). The Carbon Credit Trading and Benefit Sharing Bill, 2023. [Accessed Jan 2025]
[137] Government of Uganda. Uganda Vision 2040. [Accessed Jan 2025]
[138] Rhett A.Butler (2024). Amazon deforestation in Brazil plunges 31% to lowest level in 9 years. [Accessed Jan 2025]
[139] CCPI (2024). Brazil ranks 28th in the current CCPI and stays among the *medium*-performing countries. [Accessed Feb 2025]
[140] Government of Chile (2021). Chile's long-term climate strategy the path to carbon neutrality and resilience by 2050. [Accessed Feb 2025]

Asia offers further insights through diverse approaches. China employs a top-down but comprehensive strategy, embedding climate considerations into technical standards and sector-specific policies, particularly in large-scale infrastructure projects such as water conservancy and transportation.[141] Strong institutional frameworks and substantial investments in capacity-building and research ensure coordinated efforts. Bangladesh, meanwhile, emphasises grassroots-focused adaptation through its National Adaptation Plan (NAP) 2023–2050, which integrates adaptation strategies into local government planning and is backed by $230 billion over 20 years.[142] A multi-level institutional structure, led by the Inter-Ministerial Steering Committee on Climate Change (ISCCC), ensures cross-sectoral coordination and community engagement.

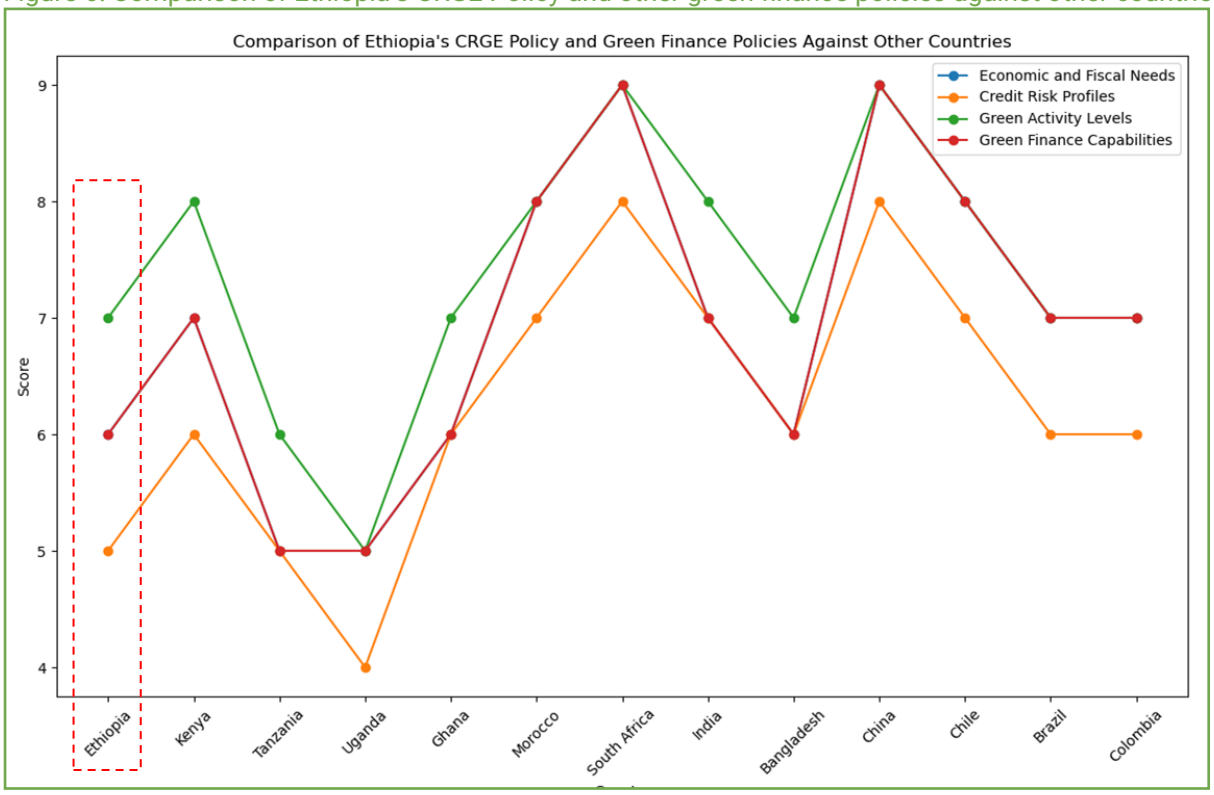
For Ethiopia, these global examples highlight critical pathways to strengthen its CRGE strategy. Legal frameworks like those of Kenya and Chile enhance policy coherence, while Uganda and Brazil demonstrate the power of cross-sectoral coordination. China's technical integration and Bangladesh's focus on localised adaptation offer valuable blueprints for embedding resilience into national planning. To close existing gaps, Ethiopia could invest in local capacity-building, standardise climate considerations across sectors, and establish dedicated regulatory bodies to manage emerging climate finance tools, such as carbon markets, enhancing both implementation and investor confidence.

2.2.5 Benchmarking Ethiopia against other markets

We present a benchmarking chart that compares Ethiopia's Climate Resilient Green Economy (CRGE) policy and other green finance policies against those of other peer countries based on four themes presented above - (1) Economic and Fiscal Needs; (2) Credit Risk Profiles; (3) Green Activity Levels; and (4) Green Finance Capabilities.

The countries selected for benchmarking were chosen based on key criteria, including the strength of their policy and regulatory frameworks, market development, institutional arrangements, access to international climate finance, financial sector readiness, and demonstrated impact in green finance. Additionally, comparability to Ethiopia's context and sectoral relevance, particularly in renewable energy, sustainable agriculture, and carbon markets, were considered to ensure practical insights

Figure 6: Comparison of Ethiopia's CRGE Policy and other green finance policies against other countries



Source: Author

Each theme is represented by a different line on the chart, and the scores for each country are plotted along the x-axis.

- **Higher Scores:** Countries like South Africa, China, and Morocco tend to score higher across all themes, driven mostly by stronger policies and institutional frameworks for green finance and climate resilience.

[141] Mong Luo. et.al, (2024). Development and practices of nature-based solutions in China. [Accessed Feb 2025]
[142] Government of Bangladesh (2022). National Adaptation Plan of Bangladesh (2023-2050). [Accessed Feb 2025]

- **Moderate Scores:** Countries like Kenya, Ghana, and India have moderate scores, showing a mix of strengths and areas for improvement. The countries are stronger on green activity level and green finance capabilities, but there is still more work to be done on strengthening the credit risk profile and economic and fiscal needs particularly on resource mobilisation.
- **Lower Scores:** Countries like Tanzania and Uganda have lower scores, suggesting more significant challenges in mobilizing resources, managing credit risk, and implementing green finance policies.

Ethiopia falls in the middle range for most themes, indicating that while there are strong commitments and frameworks in place, there is still work to be done in terms of policy coherence, institutional capacity, and effective implementation.

From the chart, it is further evident that Ethiopia has made commendable progress in green activity levels, particularly in environmental integrity and long-term vision. The country's commitment to reducing GHG emissions and enhancing climate resilience is notable. Additionally, Ethiopia's focus on sustainable agriculture and renewable energy projects demonstrates its dedication to scalable and sustainable development. These efforts have positioned Ethiopia as a leader in green initiatives among the compared countries.

The chart also highlights areas where Ethiopia needs improvement, mainly around economic and fiscal needs, particularly in policy coherence and resource mobilization. Strengthening institutional capacity and developing comprehensive credit risk assessment frameworks are crucial for enhancing green finance capabilities. By addressing these gaps and learning from good practices in countries like South Africa and China, Ethiopia can further strengthen its green finance policies and achieve its sustainable development goals.

Table 6: Benchmarking strongest learning points from selected countries

Countries	Achievements/ best lessons to Ethiopia	Financial instruments and financial mechanisms
Kenya	Kenya has various green finance instruments, including green bonds, sustainability-linked loans, and social bonds. Ethiopia can explore these innovative financial instruments to attract more investment in green projects under a coordinated policy framework with openness to embrace innovative financial instruments.	Green bonds Sovereign green bond Carbon Credits[143] Public-Private Partnerships Environmental Funds Management
South Africa	**One unique aspect of South Africa's green finance offering is its Climate Finance Facility (CFF).** The CFF is a blended finance mechanism designed to de-risk and catalyse private sector investment in climate-related projects. This facility combines public and private funds to provide concessional finance, guarantees, and other risk mitigation tools, making it easier for private investors to participate in green projects.	Green bonds Green credit Green Outcomes Fund (GOF)[144] Debt & Equity financing[145] Sustainable Infrastructure Development and Financial Facility (SIDAFF)[146] Green tax incentives
Brazil	**One unique insight from Brazil's approach to green finance is the creation of the Green Receivables Fund (Green FIDC), an innovative financial instrument that packages and securitizes the cash flows of renewable energy projects, selling shares on local capital markets to provide long-term finance.** The Green FIDC stands out because it secures 100% of its funding from private sources, making it a model for mobilizing private investment in green projects. This approach has been particularly effective in overcoming the challenges of attracting private capital for sustainable projects, which is often a significant hurdle in emerging markets like Ethiopia. By leveraging local capital markets and providing a structured, transparent investment vehicle, Brazil has created a favourable environment for green finance that Ethiopia can learn from. **From a capital markets perspective, one key learning for Ethiopia is development of a platform and mechanisms that facilitate the issuance and trading of green bonds and other sustainable finance instruments**. Brazil has achieved this through introducing specific segments for green bonds, making it easier for investors to identify and invest in sustainable projects.	Green bonds Green venture capital funds: A Green FIDC[147] Sovereign sustainable Bond Brazilian Amazon Fund[148] Carbon Pricing Concessional Financing Loans

[143] IFC (2024). Kenya's Carbon Finance Moment. [Accessed Feb 2025]
[144] Green Cape (2022). Pioneering a Climate Finance Instrument in Africa: Lessons from Two Years of the Green Outcomes Fund. [Accessed Feb 2025]
[145] CPI (2023). The South African Climate Finance Landscape 2023. [Accessed Feb 2025]
[146] Western Cape Government (2025). Western Cape Government makes strides to secure funding. [Accessed Feb 2025]
[147] CPI (2018). Design of Green FIDC to finance green projects in Brazil through securitization of receivables. [Accessed Feb 2025]
[148] CIP (2023). Landscape of Climate Finance for Land Use in Brazil. [Accessed Feb 2025]

Countries	Achievements/ best lessons to Ethiopia	Financial instruments and financial mechanisms
Colombia	**The Financial Superintendence has mandated that banks and other financial institutions disclose their exposure to climate-related risks and opportunities.** This policy enhances transparency and encourages financial institutions to integrate climate considerations into their decision-making processes. A policy integration that Ethiopia National Bank can enforce for all financial institutions in the country. By adopting similar climate risk disclosure requirements, Ethiopia can promote greater awareness and management of climate risks within its financial sector.	Green bonds Environmental funds Carbon taxes (Carbon Pricing)[149] Public-Private Partnerships Green credit Grants and concessional financing loans Debt and equity financing
Bangladesh	**Ethiopia can enhance the effectiveness of its climate finance policy by integrating climate change to its public financial management systems and budgeting process.** Bangladesh has integrated climate change into its public financial management systems through a Climate Fiscal Framework (CFF). Bangladesh's CFF, adopted in 2014 and updated in 2020, provides guidelines and tools for embedding climate considerations into budget processes, ensuring transparency and sustainability. For example, Bangladesh's CFF has helped align climate finance with national development goals, enabling efficient allocation of resources to climate-resilient projects.	Microfinance for green initiatives Green Banking[150] Co-investment Facilities (Blended finances) Renewable energy financing[151] Bangladesh Climate Change Trust Fund (BCCTF) Bangladesh Climate Change Resilience Fund (BCCRF) Concessional debts
India	Ethiopia can leverage public finance to attract private investments just like India. For instance, **India issued green bonds (Indian Renewable Energy Development Agency (IREDA)) that raised funds for solar and wind projects.** These bonds provided investors with confidence due to government backing, reducing perceived risks and encouraging more private investment. Ethiopia can use innovative financial instruments including guarantees.	Green bonds Sovereign green bond Green tax incentives Concessional loans and grants Debt and equity financing[152] National clean energy fund Public-private partnerships

Source: Author

2.3 SWOT analysis

Ethiopia's CRGE strategy represents a bold commitment to achieving sustainable development while mitigating climate change impacts. Launched as an integral part of the country's broader economic and environmental policies, the CRGE aims to cap greenhouse gas emissions while fostering green growth. The strategy incorporates key sectors such as energy, forestry, agriculture, and transport leveraging Ethiopia's renewable energy potential and afforestation efforts. However, the successful implementation of the CRGE faces both structural and financial challenges. This SWOT analysis evaluates Ethiopia's strengths, weaknesses, opportunities, and threats in executing the CRGE policy, with a focus on green climate finance. Additionally, actionable recommendations are provided to enhance policy effectiveness and financial mobilisation.

Table 7: SWOT matrix

S - Strengths

1. The **CRGE strategy** commits to limiting greenhouse gas (GHG) emissions at 150 Mt CO_2e by 2030, demonstrating strong national climate ambition.
2. Ethiopia has made **significant investments in renewable energies** such as: hydropower, wind, and solar energy, reinforcing its low-carbon development pathway.
3. **Large-scale reforestation programs** contribute to carbon sequestration, ecosystem restoration, and biodiversity conservation.
4. The **CRGE policy includes sustainable forestry management and biodiversity protection, strengthening ecosystem resilience**.

W - Weakness

1. **Incomplete emissions data and weak land-use metrics** hinder effective tracking and policy assessment.
2. **Financial constraints such as the estimated US$ 66.98 billion required by 2050** for green climate initiatives present sustainability challenges.
3. **Limited coordination between government agencies and weak sub-national implementation** was hindering effective execution.
4. The **green finance landscape is largely government- and donor-driven**, with minimal private sector engagement.

[149] Ministry of Environment and Sustainable Development. Colombia's experience developing its carbon pricing policy. [Accessed Feb 2025]
[150] Green Finance Platform (2011). Bangladesh's Policy Guidelines on Green Banking. [Accessed Feb 2025]
[151] EIB (2023). Bangladesh Renewable Energy Facility. [Accessed Feb 2025]
[152] CIP (2024). Landscape of Green Finance in India. [Accessed Feb 2025]

5. The **CRGE strategy is well-integrated into Ethiopia's ten years development plan**, ensuring alignment between economic growth and climate resilience.
6. Ethiopia has already created **several sector-based strategies aligned to the CRGE strategy**

O - Opportunities

1. Ethiopia can **attract additional funding** from sources like the Green Climate Fund (GCF) and carbon markets by strengthening Monitoring, Reporting, and Verification (MRV) systems.
2. **Technology** - adoption of satellite data, AI-driven land-use tracking, and smart agriculture can enhance climate monitoring and adaptation efforts.
3. **Expanding decentralised renewable energy** including off-grid solar and wind solutions can increase energy access and reduce emissions.
4. Adoption of **different de-risking elements and incentives** to encourage private sector involvement in green finance projects
5. There is a room to explore **more sector specific projects which can be co-financed by both private and public sector** through blended financing and de-risking options or additional incentives.

T - Threats

1. **Macroeconomic instability** such as high inflation, currency depreciation, and balance of payments issues pose risks to sustainable investment in green finance.
2. **Rising temperatures and erratic rainfall patterns** threaten agriculture and water security.
3. Unsustainable land-use practices could **undermine reforestation efforts and increase emissions**.
4. **Heavy reliance on donor financing** makes climate initiatives vulnerable to funding fluctuations.
5. **Weak enforcement mechanisms and the lack of dedicated regulatory bodies** for green finance may slow progress.
6. **Perceived risk due to low knowledge and lack of sensitisation** of the financial sector and private sector players on the green financing projects.

Table 8: Legal elements that limit the operationalization of green finance instruments in Ethiopia

Ethiopia currently lacks a comprehensive green finance taxonomy. This absence makes it challenging for investors to identify and classify green projects, which in turn hampers the flow of green finance into the country. The lack of a standardized framework means that there is no clear guidance on what constitutes a green investment, leading to inconsistencies and uncertainties in the market.

Learnings can be drawn from Kenya that has made significant strides in developing a green finance taxonomy. The Central Bank of Kenya (CBK) developed the Kenya Green Finance Taxonomy (KGFT) which provides a clear classification system for green economic activities, helping market participants make informed decisions about green investments.[153] Furthermore, development of the KGFT involved extensive stakeholder consultations, including government agencies, financial institutions, and civil society with alignment to Kenya's updated NDC and other national climate policies. A phased approach has been adopted to allow for continuous improvement and adaptation to emerging needs, with an initial focus on climate change mitigation and adaptation, with plans to include other environmental objectives, such as biodiversity, in future updates. This helps in providing clear guidance to financial institutions and market participants, helping them identify and support environmentally beneficial projects.

By adopting a clear classification system, involving stakeholders in the development process, aligning with national and international goals, focusing on key environmental objectives, and providing guidance for financial institutions, Ethiopia can create a robust framework to support its climate strategy.

Absence of financial Incentives for green projects in Ethiopia, such as tax breaks, subsidies, or grants, which can encourage investment in sustainable initiatives.

Learnings can be drawn from China's Green Finance Pilot Zones in several regions with an aim to promote green finance through tax incentives, subsidies, and preferential policies for green projects. Ethiopia can create similar pilot zones where green projects receive tax breaks, subsidies, and other financial incentives, fostering a supportive environment for sustainable initiatives.[154]

[153] Draft Kenya Green Finance Taxonomy (KGFT) | CBK. (2024, April 11). [Accessed Mar 2025]
[154] Paulsons Institute (2019, April). China's Green Finance Pilot Zones: Ready for Takeoff. [Accessed Mar 2025]

Limited coordination between government agencies and weak sub-national implementation was hindering effective execution. The major hindrance to effectiveness is caused by fragmented institutional framework, capacity constraints, and limited stakeholder engagement which cause coordination challenges.

Case in point, learning from Brazil for instance, the Brazilian government has established the Climate Fund, managed by the Ministry of the Environment and Climate Change (MMA) and the National Bank for Economic and Social Development (BNDES).[155] This fund provides substantial financial resources for projects aimed at mitigating and adapting to climate change; the coordination between these agencies ensures that funds are allocated efficiently and effectively. BNDES plays a central role in promoting green finance by engaging various stakeholders, including private sector entities and international investors. This engagement helps align efforts across different sectors and levels of government. In addition, capacity building and monitoring and evaluation is coordinated through a task force within the government and various regulators.

Ethiopia's CRGE facility can adopt a similar approach to ensure good engagement across government agencies, while working closely with NBE and ECMA.

There is no clarity on the investment pipeline or awareness to various stakeholders on the legal framework that defines and regulates green finance instruments such as green bonds, carbon credits, and blended finance. **Ethiopia can improve on this by providing clear guidelines for classifying green projects and investments, reducing regulatory uncertainty.**

Fund mobilisation strategies are lacking in regulatory context. Public-Private Partnerships (PPPs) have been leveraged to some extent in Ethiopia. However, the track record is not as strong as other countries like Kenya and Brazil have effectively leveraged public-private partnerships to fund and implement green projects. This collaboration has been crucial in mobilizing resources and expertise. Limited legal expertise and capacity in environmental and financial law hinder the development and implementation of green finance instruments.

Other case studies include Columbia that has utilised blended finance to mobilise private capital by using PPPs in de-risking investments, adopted first-loss capital strategies making projects more attractive to the private sector.[156] A different case is Brazil where significant strides have been taken in implementing cap- and trade systems to regulate carbon emissions and create a market for carbon credits,[157] whereas countries like South Africa and Kenya have leveraged on green bonds to support their energy transitions with actions such as establishing incentives and capacity building programs.

Ethiopia can adopt blended finance mechanisms to attract private investment in green projects. By leveraging public funds to de-risk investments, Ethiopia can make sustainable initiatives more appealing to private investors. Ethiopia can further enhance government coordination by establishing dedicated agencies or units to oversee and support blended finance and PPP initiatives. This can ensure efficient project implementation and attract more private investment.

2.3.1 Recommendations for delivery of a green and sustainable finance ecosystem

Central to delivery of a robust green and sustainable finance ecosystem, is the institutional arrangements of various institutions with clear division of responsibilities.

Table 9: Key regulatory actors in a green and sustainable finance ecosystem

Institution	Responsibilities
Ethiopian Capital Market Authority (ECMA)	Responsible for regulating and supervising the issuance of green bonds and other green finance instruments. ● Green Bonds Regulation: Develop and enforce regulations for the issuance and listing of green finance instruments such as bonds ● Disclosure Requirements: Ensures continuous reporting and transparency of green finance instrument issuers. ● Project Eligibility: Defines eligible projects that can be financed through green finance instruments, focusing on climate change mitigation, adaptation, and other environmental benefits

[155] Climate Fund Program - BNDES. (n.d.). [Accessed Mar 2025]
[156] Baraker, L. (2024, February 12). Why Emerging Hedge Fund Managers Should Consider First Loss Allocations. EFSI. [Accessed Mar 2025]
[157] Brazil adopts cap-and-trade system. (2024, November 28). International Carbon Action Partnership. [Accessed Mar 2025]

Institution	Responsibilities
National Bank of Ethiopia (NBE)	Oversees the financial sector, ensuring that banks and financial institutions comply with green finance regulations and guidelines. ● Develops and enforces regulations for green finance, including the Ethiopia Green Finance Taxonomy which will classify economic activities as green or environmentally sustainable. For example, the Kenya Green Finance Taxonomy (KGFT) is developed and overseen by the Central Bank of Kenya. ● Ensures transparency and comparability of green financial products through stringent disclosure requirements. ● Provides technical support to financial institutions in implementing green finance practices
Ministry of Finance	Develops and implements national policies on green finance, coordinates with international donors and financial institutions, and provides fiscal incentives for green investments. ● Formulating and implementing fiscal policies that promote green finance, including tax incentives and subsidies for environmentally sustainable projects, ● Coordinates the mobilization of climate finance from various sources, including private, public, multilateral, bilateral, and philanthropic ● Budget Allocation: Allocates budgetary resources to support green initiatives and projects
Ministry of Planning and Development	Lead agency responsible for coordinating the development and implementation of the NCMS. It oversees the overall strategy and ensures alignment with national development goals and international commitments. They will collaborate with the Ministry of Environment, Forest and Climate Change (MEFCC), Ministry of Finance, and other relevant sectoral ministries. Further to this, a national carbon registry will be established to track and manage carbon credits and transactions. This registry will ensure transparency, accuracy, and accountability in carbon market activities. Specialized technical committees will be formed to provide expertise and guidance on specific aspects of the NCMS, such as Monitoring, Reporting, and Verification (MRV), carbon pricing, and market mechanisms.
Line Ministries (e.g., Ministry of Energy, FDRE Environmental Protection Agency)	● Sector-Specific Policies: Develops and implements policies specific to their sectors that promote green finance (e.g., policies for renewable energy, water management, and biodiversity conservation). ● Project Implementation: Oversees the implementation of green projects within their sectors ● Collaboration: Works with other ministries and agencies to ensure a coordinated approach to green finance

Source: Author

3 | Review of green financing options

Green finance encompasses both equity and debt instruments, each designed to support environmentally and socially sustainable economic activities, projects and assets e. Equity instruments include junior equity (higher risk, higher potential return) and senior equity (lower risk, preferential rights), while mezzanine capital occupies a middle ground in terms of risk and return. Debt instruments include loans for project financing, thematic bonds (issued by sovereigns or corporations for specific green projects), and credit guarantees (reducing investment risk). Other debt-oriented options include infrastructure debt funds (long-term financing), liquidity facilities (enhancing credit profiles), and asset-backed securities (secured by pools of green assets). Finally, hybrid facilities combine equity, and debt features to cater to diverse investor preferences.[158]

Having assessed the policy and enabling environment for green finance, and analysed its strengths and weaknesses, this section maps the potential measures that can be undertaken to address them and the financial instruments applicable. Section 3.1 offers a detailed analysis regarding which green finance instruments are most suitable to address these measures and the way they could potentially be funded while section 3.2 presents the project pipeline profiles, funding needs, estimates, and timelines.

3.1 Mapping potential green financing instruments[159]

The guiding question is: What financial instruments are relevant in channelling, both from within and outside of Ethiopia, green finance through the capital markets in Ethiopia? A further sub-question on relevance for capital markets both outside and inside Ethiopia was used to enhance the screening. Thereafter, we first listed as many instruments as we believe could potentially be relevant for the context, then rank such alternatives based on agreed upon criteria.

In the context of this assignment, a financial instrument is defined as “monetary contracts between parties, which can be created, traded, modified, and settled under the regulation of a capital market authority”.

3.1.1 Criteria and scoring methodology of the financial instruments

From the initial pool (Table 10), we then scored the different financial instruments assigning a score spanning from 1 to 4 according to the following criteria and weights: For each of these criteria, a score of “1” was given if the answer to the question is “most probably not”, and “4”, if the answer is “very much so”.

Table 10: Initial list and categories of the financing options

Category	Description	Examples of financial instruments
Funding/Investment	Instruments or facilities that themselves, or the services they provide, will constitute a financial liability for the entity receiving funding, or an investment/financial asset from the perspective. This comprises debt and equity.	● Thematic Bonds and Loans (Green, Social and Sustainable (GSS) bonds; Blue Bonds – Use of Proceeds structure; Sustainability-Linked Bonds (SLB Bonds) – KPI-linked structure ● Securitization structures ● National Green / Climate Funds / Banks/ Vehicles / Platforms ● Green/ESG stock indices
Results-based financing and/or payment mechanisms	Instruments or mechanisms that provide rewards to individuals or institutions after agreed-upon results are achieved and verified.	● Sale of Carbon Credits ● Impact/Result-based Bonds ● Fixed-Impact Bonds
Other financing options	Any other instrument identified that not closely matches the former two groups.	● Insurance Linked Securities (ILS) / Catastrophe Bonds (Cat-bonds) ● Climate risk insurance ● Green credit guarantees ● Blended Finance Facilities

Source: Author

[158] Watson, C., Schalatek, L., and Evéquoz, A. (2024). Climate Funds Update: "The Global Climate Finance Architecture." ODI. [Accessed Feb 2025]
[159] In the context of this project, “financing instruments" are understood as monetary contracts between parties, which can be created, traded, modified, and settled under the regulation of a capital market authority.

The initial pool of 18 instruments were ranked, assigning a score spanning from 1 to 4 according to the criteria and weights under table 11.

Table 11: Criteria and scoring approach

Criteria	Description	Weighting in %
Feasibility & actionability	***Operational*:** Are enabling financing structures in place in Ethiopia? Would the financing instrument mobilise green finance without requiring the development of new financial infrastructure? Would the instrument be operational in the short-term or medium-term?	20%
	***Legal (within ECMA)*:** Is there any existing regulation supporting deployment of the financial instrument? Are guidelines/draft laws in place to support the financial instrument?	10%
	***Legal (outside of ECMA)*:** Is there any existing regulation outside of ECMA supporting the deployment of the financial instrument?	10%
	Demand: Is there existing demand for the instrument to finance priority sector green projects? (will be partially answered from demand-side interviews)	25%
	Political: Is there a possibility of opposition on the financial instrument? What is the influence level of the opposition? Can their concerns be met, even partially, with an additional financial instrument/guidelines?	5%
Impact & Additionality	Can the deployment of this financial instrument significantly contribute to: - increasing the implementation of green measures / achieving resilience - additionality / mobilization of additional funds	20%
Cost	Is the upfront and/or opportunity cost associated with the financing instrument low? Are there existing mechanisms/financial sources that can absorb the cost?	10%

Source: Author

Section 3.1.2 summarises the initial results. For full detail of each of the instruments, please refer to the Database (Excel document) shared in the sheet "2. Financial Instrument (FI)", and Annex 2.

3.1.2 Selected financing instruments

After a process of scoring and shortlisting based on desktop analysis, and a validation workshop with ECMA, FSD Ethiopia and various MDAs in multiple domains,[160] the following selected financial instruments were prioritised:

Table 12: Shortlisted financial instruments

Rank	Financial Instrument (FI)	Type of FI	Stage 1: Screening		Stage 2: Ranking							Score
			Relevant for capital markets outside Ethiopia?	Relevant for capital markets in Ethiopia?	Operationality Feasibility /Actionability	Legal Feasibility within ECMA	Legal Feasibility outside ECMA	Existence of demand	Political Feasibility /Actionability	Impact & Additionality	Cost	
			Y/N	Y/N	20%	10%	10%	25%	5%	20%	10%	(1-4)
1	National & Subnational Cimate Funds (CFs) or Financing Vehicles (FVs) or Investment Platforms (IPs)	*Funding / Investment*	*Yes*	*Yes*	3.0	4.0	3.0	3.0	3.0	3.5	2.0	***3.1***
2	Impact bonds	*Results-Based Financing*	*Yes*	*Yes*	3.0	3.0	3.0	2.5	4.0	4.0	2.5	***3.1***
3	Thematic bonds - Green, Social and Sustainable (GSS) bonds; Blue Bonds; Sustainability-Linked Bonds (SLB Bonds)	*Debt instrument*	*Yes*	*Yes*	3.0	3.0	3.0	3.0	4.0	3.0	3.0	***3.1***
4	Blended Finance Facilities	*Development finance*	*Yes*	*Yes*	3.0	4.0	3.0	2.5	4.0	3.0	3.0	***3.0***
5	Sale of carbon credits	*Results-based payment mechanisms*	*Yes*	*No*	3.0	2.0	4.0	3.0	4.0	3.0	2.0	***3.0***

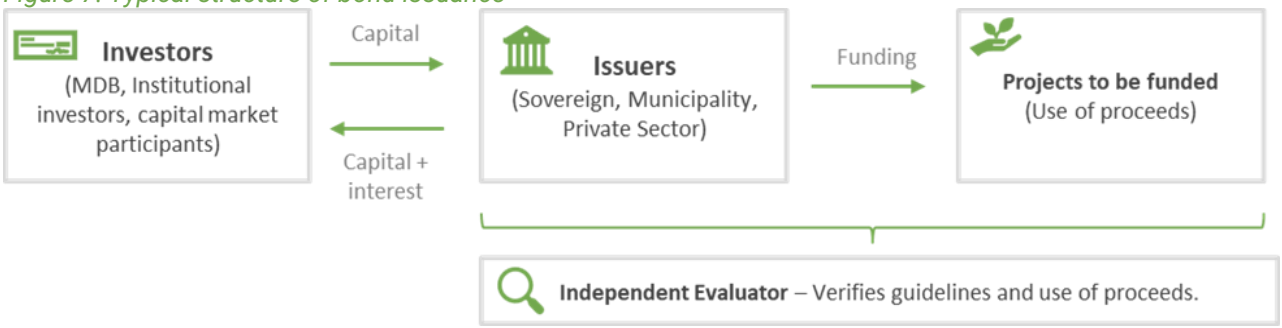
Shortlisted financial instruments - Rank 1 and 2

Rank 1: Thematic Bonds - Green, Social and Sustainable (GSS) bonds; Blue Bonds; Sustainability-Linked Bonds (SLB Bonds)

Thematic bonds are bonds that have specific environmental, social or governance (ESG) or sustainability objectives. Issuers are expected to establish a 'thematic' Finance Framework aligned with the ICMA Principles. These bonds maintain a standard structure but include an additional commitment to the label that has been applied to the projects and transparency.

[160] Annex 4 showcases the database with stakeholder contributions during the validation workshop on Friday, 28 March 2025 at Ethiopian Skylight Hotel, Addis Ababa, Ethiopia

Figure 7: Typical structure of bond issuance



Source: Author

They are typically attractive to institutional investors, climate-related funds, and retail investors interested in sustainable investments. The thematic bond market has the following two main categories:

Structure	Thematic bond
Use of Proceeds structure	**Green, Social and Sustainable (GSS) Bonds:** Ordinary Debt Capital Market (DCM) issuance with certification on the sustainable use of proceeds. Green bonds allocate funding to environmentally beneficial projects and were first issued globally in 2007. Social Bonds allocate funding to socially beneficial projects and were issued first in 2010, and Sustainable allocate funding to either socially or environmentally beneficial projects, and were issued first in 2012.
	Blue Bonds: Blue bonds are a developing asset class that can facilitate the creation of sustainable ocean-related business opportunities, promote responsible ocean management, and address water-related issues. The proceeds from a blue bond are specifically earmarked for investment in business solutions that support oceanic health, freshwater, and/or improved access to water and sanitation. Blue bonds were first issued globally in 2018 by the Republic of Seychelles (US$ 15 million). In this case, the World Bank assisted in developing the blue bond and reaching out to the three investors: Calvert Impact Capital, Nuveen, and U.S. Headquartered Prudential Financial, Inc.[161] Gabon in collaboration with the Nature Conservancy (TNC) launched a US$ 500 million blue bond project in 2023 that refinances part of Gabon's national debt, generating US$ 163 million for ocean conservation. The funds will support marine spatial planning, protect endangered species, and strengthen regulations in the fishing industry.[162]
KPI-linked structure	**Sustainability-Linked Bonds (SLB Bonds):** DCM issuance whose structural characteristics vary depending on the issuer's sustainable target's achievement. The first SLB was issued in September 2019 by Enel, a multinational energy group. JSE-listed Netcare, in partnership with Standard Bank, launched Africa's first sustainability-linked bond in South Africa and Lesotho in March 2021, a 3-year issuance totalling US$ 67 million.[163] Rand Water, a South African state-owned company, followed in July 2021 with an issuance of approximately US$ 110 million).[164] In 2023, Development Bank of Rwanda (BRD) launched its inaugural SLB in 2023, supported by the World Bank, with an issuance of a US$ 120 million Medium Term Note (MTN) program focusing on improvement of ESG systems, increased funding to women-led projects, and financing affordable housing.[165]

Source: Author based on linked sources

The key features in bonds are the ability to understand how the proceeds are used and how the monitoring of actual versus stated objectives is done.

[161] World Bank Group. (2018, October 31). Seychelles launches World's First Sovereign Blue Bond. World Bank. [Accessed Mar 2025]
[162] The Nature Conservancy announces debt conversion for ocean conservation in Gabon, first ever in mainland Africa. (2023, Aug). The Nature Conservancy. [Accessed Mar 2025]
[163] Smith, T. (2021, March 18). Africa's first sustainability-linked bond now available. ESI Africa. [Accessed Mar 2025]
[164] Odendaal, N (2021, July 1). Rand Water reports successful R1.7bn bonds auction. Engineering News. [Accessed Mar 2025]
[165] World Bank Group. (2023, September 29). Rwanda Development Bank launches First Sustainability-Linked Bond to promote Inclusive Sustainable development. World Bank. [Accessed Mar 2025]

Figure 8: Summary of the principles guiding the thematic bond market

Source: Brown Advisory

Across Africa, there have been several successful green bond issuances being used to fund a variety of initiatives, including renewable energy, energy-efficient buildings, sustainable agriculture, and water management.[166] Despite this growing interest in green bonds the continent's issuances rank at 1% of total global issuances. [167] Ethiopia is looking towards green bond issuance with various stakeholders showing an interest including Development Bank of Ethiopia (DBE) in collaboration with ECMA.

Relevant Examples / Cases in Africa	Country	Issuance summary	Use of proceeds
Sovereigns	**Nigeria** Green Bond	US$ 30 million in 2017 for 5 years at 13.48% coupon rate, certified by the Climate Bonds Initiative (CBI)	Used to finance renewable energy and afforestation projects
	Green bond	US$ 41 million in 2019 for 7 years at 14.5% coupon rate, certified by CBI	
	Egypt Green bond	US$ 750 million in 2020 for 5 years at 5.25% coupon rate	Directed for adaptation and sustainable water practices
	Morocco Green bond by Moroccan Agency for Sustainable Energy[168]	US$ 117 million in 2016 for 18 years at 3.199% coupon rate (semi-annual), certified by CBI	Used to finance utility-scale solar power facilities
	Seychelles Blue Bond	US$ 15 million in 2018 for 10 years at 2.8% coupon rate	Used for ecosystem adaptation and coastal ecosystem resilience
Municipalities	**South Africa** City of Johannesburg Green bond[169]	US$ 138 million in 2014 for 10 years at 10.18% coupon rate	Used to fund green initiatives
	South Africa City of Capetown Green Bond[170]	US$ 74 million in 2017 - 2020 for 10 years at 10.17% coupon rate	Used for water assets to build resilience to drought impacts
	Tanzania Tanga Urban Water Supply and Sanitation Authority (Tanga UWASA)[171]	TZS 53.12 billion (approx. US$ 21 million) at 13.5% coupon rate for 10 years	Used to double water production and treatment capacity, reduce water loss, expand the water distribution network, install smart meters, connect new customers, and install water kiosks
Private sector	**South Africa**		

[166] Njoroge, J. (2023, May 6). Climate financing: Africa's green bonds uptake on a roll | The Exchange. The Exchange Africa. [Accessed Feb 2025]
[167] Gibson, L. (2023, July 5). Why African countries are turning to green bonds. Semafor. [Accessed Feb 2025]
[168] Moroccan Agency of Sustainable Energy S.A. (MASEN). (2019, July 25). Climate Bonds Initiative. [Accessed Mar 2025]
[169] JSE. (2024, October 16). City of Johannesburg lists first green bond in South Africa. JSE. [Accessed Mar 2025]
[170] *[file] 1.* Cape Town - Green Bonds.pdf (48285). (n.d.). [Accessed Mar 2025]
[171] Tanga Urban Water Supply And Sanitation Authority (n.d.) Tanga Uwasa Bond Pricing Supplement. [Accessed Mar 2025]

Relevant Examples / Cases in Africa	Country	Issuance summary	Use of proceeds
	Standard Bank of South Africa Green Bond[172]	US$ 200 million in 2020 for 10 years at 5.4% coupon rate	Used to finance eligible green assets under SBSA's Sustainable Bond Framework
	South Africa Netcare of South Africa issued SLB[173]	US$ 67 million in 2021 for 3 years at 5.4% coupon rate	Targets Netcare's climate change mitigation and water efficiency targets
	Nigeria Access Bank's green bond[174]	US$ 41 million in 2019 for 5 years at 15.5 coupon rate	Allocated to coastal flood defences to protect against sea level rise in Eko Atlantic City, a new coastal urban development near Lagos
	Kenya Green bond[175]	US$ 41 million in 2019 for 5 years at 12.25% coupon rate, certified by CBI	Used for green buildings
	Namibia Bank of Windhoek[176]	N$277 million in 2021 for 5 years at JIBAR + 1.50% coupon rate	Directed towards on renewable energy, energy and resource efficiency, green buildings and sustainable waste management
	Côte d'Ivoire Emergence Plaza, the owner of Cosmos Yopougon shopping centre	US$ 17.8 million in 2019 for 8 years at 7.5 coupon rate, certified by CBI	Used for financing investments in equipment and systems that enable greenhouse gasses mitigation, certified against IFC EDGE Scheme
	Kenya, BURN Manufacturing, a clean cookstove manufacturer and distributor [177]	U$10 million green bond designated for clean cooking financing	Used to enable BURN to increase its manufacturing capacity in Kenya and launch a new facility in Lagos, Nigeria, increasing production from 400,000 to 600,000 units per month. This will support the distribution and adoption of sustainable cooking solutions across Africa.
	Tanzania, CRDB Bank[178]	US$ 300 million, the largest green bond issuance in Sub-Saharan Africa, for 5 years at 10.25 coupon rate, payable twice per annum	Used for environment-friendly projects aimed at mitigating climate change. These projects span sectors such as renewable energy, infrastructure, water supply, manufacturing, and construction

Source: Various from Marbuah, G. (2021).[179]

Further considerations on issuances of these bonds include:

Parties involved	Advantages	Risks / Challenges	Mitigators
• Issuers • Project developers • Project funders (Investors) • Buyers • Intermediary buyers • Third-Party Auditors (Verifiers)	Thematic bonds attract sustainable financing and investment, enhance reputation, and support sustainable development. Further use of blended facilities and guarantees are used to develop pipeline of projects and	• Greenwashing: practice of exaggerating or falsely claiming the environmental benefits of a project funded by a green bond to attract investors. • Lack of standardisation: The absence of a universally accepted definition and standards for green bonds	• Verification Processes: Use third-party audits to ensure credibility. • Regulatory Frameworks: Clear rules reduce uncertainty and fraud.

[172] SBSA Green Bond Disclosure. (n.d.). IFC. [Accessed Mar 2025]
[173] Netcare. (2021, March). Netcare and Standard Bank launch Africa's first sustainability-linked bond. [Accessed Mar 2025]
[174] Access Bank. (2019). Access Bank Green Bond: Banking on In-House Competence and International Frameworks. In Case Study. [Accessed Mar 2025]
[175] First Green Bond from Kenya: Acorn USD40m - Climate Bonds Certified, financing green buildings. (2019, November 21). Climate Bonds Initiative. [Accessed Mar 2025]
[176] Bank Windhoek. (n.d.). Bank Windhoek issues first Green Bond. [Accessed Mar 2025]
[177] FSD Africa. BURN Issues Usd $10m Green Bond to Support Clean Cooking In Sub-Saharan Africa. [Accessed Feb 2025]
[178] Ngila, F. (2023, October 6). CRDB issues Tanzania's first-ever green bond. African Business. [Accessed Mar 2025]
[179] Marbuah, G. (2021). Scoping the green bond landscape in Africa. SEI Brief. Stockholm Environment Institute. [Accessed Mar 2025]

Parties involved	Advantages	Risks / Challenges	Mitigators
● Standards organisations ● Local communities ● Government institutions	boost investor confidence in the issuance	creates uncertainty and hinders market development. ● Project performance risks: This involves the possibility that green projects financed by bonds may not achieve their intended environmental outcomes or may face operational challenges.	● Community Involvement: Ensures equitable benefits and long-term success

Source: Author

In the Ethiopian context, the operational feasibility of green bonds is challenged by limited technical know-how in assessing environmentally related climate risk and opportunities and a lack of a green taxonomy framework. This includes difficulties in project screening, underdeveloped investment pipelines, and a lack of awareness about green bonds. To overcome these hurdles, targeted technical assistance and support are needed to build local capacity and awareness. Furthermore, there is a need for specific directives targeted towards green bonds by the ECMA. Robust green finance frameworks that are legally sound and aligned with international standards are in place, but they need further strengthening in terms of implementation and sectoral alignment. In the domestic market, demand is much lower, with big institutional investors like public and private pension funds still nascent and lacking the ability to assess green bonds. However, green bonds align well with government initiatives promoting green finance and sustainable development.

Rank 1: National Green/Climate Funds, Banks, Vehicles, and Platforms

These are financial facilities that provide finance in the form of grants, concessional loans, loans and equity investments, with the ability to blend both public and private sources, to initiatives aimed at addressing sustainability and climate change challenges. These funds support initiatives focused on green growth and climate both mitigation and adaptation activities, including energy sector investment, conservation, agriculture and the strengthening of early warning systems. The process of establishing these facilities is demand-driven, requiring strong political support from the national government. They align with national priorities, reduce barriers to access for smaller organizations, rapidly deploy climate funds into projects in sectors of strategic national importance, and expand the capital base for scale-up.

Bhandary's 2022 study on National Climate Facilities (NCFs) reveals that nearly half of these funds possess an independent legal status, coupled with financial and administrative autonomy.[180] NCFs are generally categorized based on their scope and objectives.

- **Nationally anchored funds** are directly integrated into national policy frameworks and strategies. A prime example is Ethiopia's Climate Resilient Green Economy (CRGE) Facility, established in 2011 as a core component of the country's CRGE strategy. This fund aligns its investments with the overarching national goal of fostering a green and climate-resilient economy.
- **Funds with bounded mandates** have more specific and targeted objectives, often focusing on sectors or technologies. South Africa's Green Fund exemplifies this category, with a mandate to support and demonstrate innovative climate technologies. These funds play a crucial role in piloting and scaling up new solutions that can contribute to climate change mitigation and adaptation.

The degree to which the fund engages with the private sector is determined by its objectives, the risk tolerance of its contributing parties, its legal form, and engagement with the private sector. The following table summarises relevant examples, parties involved, advantages and challenges as well as potential mitigators:

Relevant Examples in Developing Countries			
Bangladesh set up a climate fund, Climate Change Resilience Fund, which is a multi-donor trust fund supporting adaptation projects in the country.[181]			
Parties involved	**Advantages**	**Risks / Challenges**	**Mitigators**

[180] Bhandary, R.R. (2022) National climate funds: a new dataset on national financing vehicles for climate change. Climate Policy, 22 (3), 401-410 [Accessed Feb 2025]
[181] UNDP. (2023). Bangladesh Climate Change Resilience Fund (BCCRF). [Accessed Feb 2025]

• Government institutions • International donors • Private Sector • Development partners	A centralised mechanism ensures alignment with national priorities, facilitates access to international climate finance and encourages blended finance approaches for leveraging private capital.	• Limited technical capacity for project preparation. • High reliance on international grants. • Weak integration with domestic financial markets.	• Capacity-building programs for government agencies. • Establishing clear governance frameworks. • Promoting public-private partnerships to enhance private sector involvement.

Source: Author

In Ethiopia, a climate fund in the form of the CRGE (Climate-Resilient Green Economy) facility exists, although it requires capacity building for project pipeline development, robust monitoring systems, and stakeholder engagement mechanisms to bring in private sector investment.

The CRGE Facility was established to support the implementation of Ethiopia's CRGE strategy, which aims to build a carbon-neutral and climate-resilient middle-income economy by 2025. The legal mandate for the CRGE Facility is derived from the Ethiopian government's commitment to reducing greenhouse gas emissions and enhancing climate resilience, as outlined in the CRGE strategy launched in December 2011.

The CRGE Facility is governed by a Management Committee, which is co-chaired by the Ministry of Finance (MoF) in collaboration with the MoPD. The facility is managed under the UN Agencies, CRGE Facility, and Regional Economic Cooperation Directorate within the MoF.

The CRGE Facility has a well-defined organizational and governance structure:

1. **Management Committee:** This committee is co-chaired by state ministers from the Ministry of Finance and the Environment, Forest, and Climate Change Commission. It includes representatives from all sector ministries involved in the CRGE strategy, both at the state minister level and senior technical experts from their CRGE units.
2. **Advisory Board:** The board comprises representatives from development partners, the private sector, multilateral development partners, civil society organizations (CSOs), and academia. It functions to share and review information relevant to the performance of the CRGE Facility and influence the resources available to the facility.
3. **Operational Units:** The facility includes various operational units responsible for mobilizing and managing funds, ensuring compliance with national and international fiduciary standards, and supporting efficient and effective actions in greenhouse gas emissions reduction and resilience building.
4. **Monitoring and Evaluation**: Robust systems are in place for monitoring, reporting, and verifying the impact of funded projects. This ensures transparency and accountability in the use of funds and the achievement of environmental goals.

Source: Climate Resilient Green Economy (CRGE) facility.

There is high demand for these facilities due to Ethiopia's vulnerability to climate change impacts and ambitious green growth targets under the CRGE strategy. However, limited technical capacity and associated costs of setting up such funds may deter on the ground demand, especially locally. Collective Investment Schemes (CIS), which pool money from many investors to invest in a portfolio of assets, including climate-related projects, can be leveraged to develop and bring in private sector financing into Climate Funds.

By aligning the CRGE's facility with the country's investment promotion strategies, it can attract greater investment in sustainable development projects, thereby enhancing climate resilience and supporting the achievement of green economy goals. Chile's National Green Fund serves as a prime example, as it integrates investment promotion to attract private sector investment in renewable energy and sustainable infrastructure. Similarly, Indonesia's SDG One Platform aligns the country's SDGs and climate objectives, facilitating investments in renewable energy, sustainable agriculture, and climate resilience projects. This integration of climate finance with investment promotion has enabled Indonesia to attract significant international funding. However, costs include establishing robust governance systems, technical assistance for project preparation, and ongoing monitoring/reporting requirements. The impact of these funds largely depends on effective project selection, monitoring, and alignment with national priorities.

Rank 1: Impact Bonds

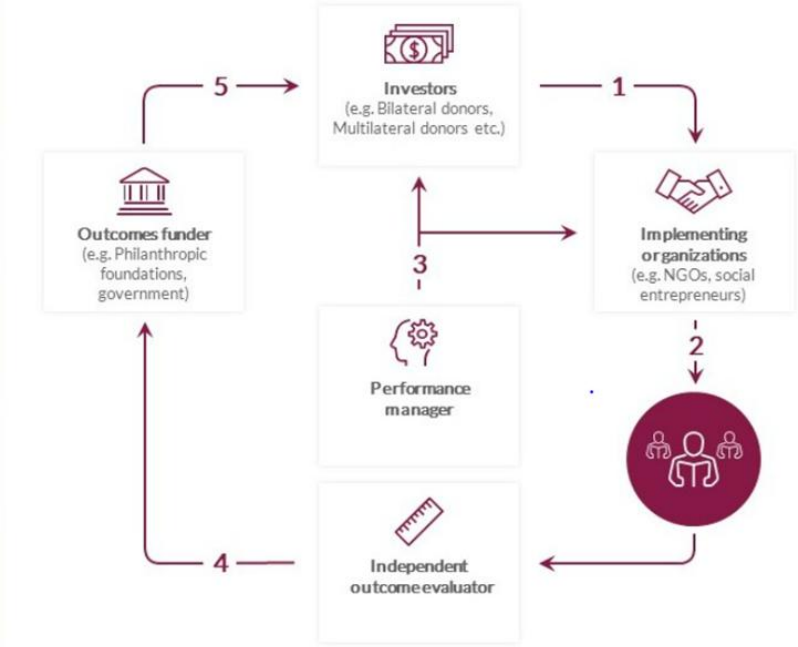
Impact bonds, including Social Impact Bonds (SIBs) and Development Impact Bonds (DIBs), are a type of Results-Based Financing instrument used for projects with measurable social and environmental impacts, such as green infrastructure, renewable energy, and sustainable agriculture. The repayment and returns on these bonds are contingent on achieving

specific outcomes or impacts, making them suitable for green projects that require innovative financing solutions. Payment is tied to the achievement of specific outcomes, which can include environmental metrics like carbon reduction or water conservation. The model typically involves a pay-for-performance scheme where investors receive returns only if predefined outcomes are met.

Impact bonds can be structured in different ways, but would generally comprise the following structure (See figure 9):

- **Investors** commit working capital upfront to service provider(s) with an expectation of meeting target outcomes.
- **Implementing organisations** deploy solutions using this working capital to target beneficiaries.
- **A performance manager** tracks performance, manages risk, prepares meaningful reports to facilitate decision making.
- An **independent evaluator** verifies or assesses impact of solutions and develops an outcome report for the **outcome funders**.
- If targets are met, outcome funders pay investors the principal and a rate of return. If targets are not met, there is either none or partial pay-out.

Figure 9: Typical structure of an impact bond



Source: Dalberg (2021)[182]

The following table summarises relevant examples, parties involved, advantages and challenges as well as potential mitigators:

Relevant Examples in Developing Countries			
Peru has developed the Asháninka Impact Bond, which is focused on agriculture. This bond was completed within a year and demonstrated the feasibility of impact bonds in supporting sustainable agriculture practices.[183] The Educate Girls Development Impact Bond in India successfully enrolled 768 out-of-school girls in Rajasthan and achieved 160% of the target learning gains.[184]			
Parties involved	**Advantages**	**Risks / Challenges**	**Mitigators**
● Government Agencies: Play a crucial role in designing and implementing impact bonds, particularly in ensuring regulatory compliance and providing outcome funding.	Enhances project impact, supports sustainable development and attracts Innovative financing solutions.	● Complexity of outcome measurement: Impact bonds require robust outcome measurement systems, which can be challenging to establish and maintain.	● Capacity Building ● Multi Stakeholder Engagement: Collaboration among government agencies, private sector investors, philanthropic organizations, and service

[182] Channey, J. (2021, September 12). How Development Impact Bonds work, and when to use them. Dalberg. [Accessed Mar 2025]
[183] Mishra, A. K., and Dash, A. K. (2022). Development impact bonds in developing countries: an emerging innovation for achieving social outcomes. PMC. [Accessed Feb 2025]
[184] Gustafsson-Wright, E., Boggild-Jones, I., Segell, D., Durland, J., Brookings Institution, & Convergence. (2017). Impact Bonds in Developing Countries: Early Learnings from the Field. In Impact Bonds in Developing Countries (pp. 2–8). [Accessed Mar 2025]

● Private Sector Investors: Provide upfront capital for impact bonds, bearing financial risk in exchange for potential returns based on outcomes achieved. ● Philanthropic Organizations: Often act as outcome funders, providing the financial backing for outcome payments if specific targets are met. ● Service Providers: Deliver the services or interventions that are being financed through impact bonds, such as education or healthcare services.		● Limited technical capacity: Inadequate technical expertise in structuring and managing impact bonds can limit their effectiveness."	providers ensures that impact bonds are well-designed and meet the needs of all parties involved. ● Robust Outcome Measurement Strategies

Source: Author

In Ethiopia, the operational feasibility of impact bonds is hindered by the complexity of outcome measurement and limited technical capacity. However, the CRGE strategy provides a supportive framework. While the country has robust green finance frameworks that are legally sound and aligned with international standards, the implementation and sectoral alignment need to be strengthened. There is high demand for innovative financing solutions that support sustainable development and social projects in Ethiopia, driven by the country's commitment to sustainable development. However, the limited technical capacity and the steep costs for performance measurement present challenges. Despite these, impact bonds align with Ethiopia's development goals and commitment to environmental sustainability and can significantly enhance project impact by focusing on measurable outcomes, contributing to Ethiopia's green economy goals. The initial setup costs can be high due to the complexity of outcome measurement and limited on-the-ground technical expertise, but the long-term benefits include increased efficiency and effectiveness.

The presented example of Educate Girls DIB and Peru's AIB demonstrates how development impact bonds can be used to address social challenges in regions with similar socio-economic conditions to Ethiopia. The success of these DIBs highlights the potential for using innovative financing mechanisms to achieve social outcomes in developing countries.

Rank 2: Sale of Carbon Credits

Carbon credits are results-based payment tradeable certificates that allow businesses to compensate for their emissions by buying permits generated by projects reducing pollution. These credits support local economies and fund impactful work when executed well. The process begins with project development, where initiatives aimed at reducing greenhouse gas emissions are initiated. These projects adhere to specific methodologies and standards to ensure they deliver genuine emission reductions. Independent third-party auditors validate the project design and verify the actual emission reductions achieved. The emission reductions are then converted into carbon credits and issued by a registry that tracks their creation, ownership, and retirement. These credits can be sold directly to buyers needing to offset their emissions or through brokers and intermediaries who facilitate transactions.

Carbon credits are traded in market platforms that can either be explicit or implicit. Explicit carbon markets are based on carbon pricing enacted by a government mandate and imposes a price based on the carbon content via a carbon tax or an emissions trading system (ETS)[185] via cap-and-trade and/or baseline-and-credit. Carbon markets can also be implicit where the equivalent value per tonne of carbon is associated with a specific policy instrument thus deriving an implicit carbon price; or internal – voluntary carbon pricing by corporations, organisations, and governments where an internal carbon price[186] is used to guide investment decisions and promote efficiencies in business operations.[187] Carbon credit buyers can either be:

- Regulated entities that are subject to a carbon tax or emissions trading scheme and are permitted by their regulators to use carbon credits to meet their compliance obligations.
- Airlines under the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) scheme that provides a harmonized approach to reducing emissions from international aviation. CORSIA minimizes market distortion while

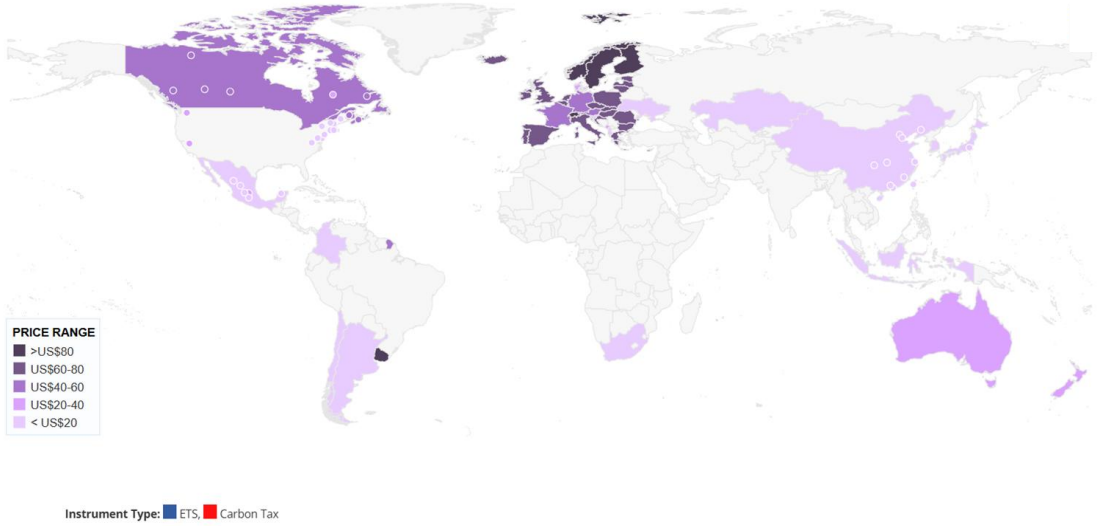
[185] Governments can also add design elements such as price floors or ceilings in an ETS
[186] Multilateral development banks, including the World Bank, and some governments use a shadow carbon price when evaluating public investments
[187] World Bank (n.d.). Carbon Pricing Dashboard. [Accessed Feb 2025]

respecting the special circumstances and respective capabilities of the International Civil Aviation Organization and airlines (Ethiopia recently became a member);[188] and

- Voluntary buyers who use carbon credits to meet voluntary emission reduction targets i.e., to be carbon neutral.

Figure 10 presents the status and trends in carbon pricing across the world.

Figure 10: Carbon price ranges across the world



Source: World Bank

Article 6 of the Paris Agreement on carbon markets offers the opportunity for countries to engage in cooperative approaches to GHG emissions, resulting in more cost-effective reductions. Furthermore, Ethiopia can leverage Article 6 mechanisms (bilateral trading under Article 6.2 or market-based instruments under Article 6.4) to access international carbon finance through its significant potential for carbon sequestration across its forest, agriculture, and energy sectors.

Ethiopia's forests play a crucial role in carbon sequestration, while enhancing nature's ability to regulate itself. The country's diverse forest ecosystems, including highland forests and bamboo forests, have substantial carbon storage capacities. For example, studies have shown that remnant forests in northern Ethiopia can store significant amounts of carbon, with aboveground biomass reaching 2059.13 tons per hectare.[189] The Ethiopian government has also implemented policies to enhance forest carbon sequestration, such as the Forest Development, Protection, and Utilization Regulation No. 544/2024.[190]

Agricultural practices in Ethiopia also have a considerable potential for carbon sequestration. Improved management practices, such as agroforestry, restrained grazing, and terracing, can significantly increase soil carbon stocks. Research indicates that agroforestry and restrained grazing can lead to higher soil carbon stocks compared to traditional practices.[191] Additionally, climate-smart agriculture and carbon farming practices, such as cover cropping and no-till farming, can further enhance soil carbon sequestration.[192]

The energy sector in Ethiopia also contributes to carbon sequestration through renewable energy projects and improved energy efficiency. Ethiopia's commitment to renewable energy, including hydro, wind, and solar power, helps reduce carbon emissions. The country's participation in carbon markets, such as the Clean Development Mechanism (CDM), has resulted in the issuance of over 2 million carbon credits from biomass energy and solar lamp projects.[193] These initiatives not only reduce emissions but also contribute to carbon sequestration by promoting sustainable energy practices.

Ethiopia currently has two Clean Development Mechanism (CDM) projects and six Programme of Activities (PoAs). The six PoAs include four activities focused on improved cook stoves, one on biomass energy, and one on solar lamps.[194] The 16 component project activities (CPAs) under these projects were all included in the PoAs after 2012, with the most recent inclusion in 2018. These activities have resulted in the issuance of nearly one million certified emission reductions (CERs).[195]

[188] Ethiopia becomes an international civil aviation council member – New Business Ethiopia. (2022, October 5). [Accessed Feb 2025]
[189] Muluneh, M. G., & Worku, B. B. (2022). Carbon storages and sequestration potentials in remnant forests of different patch sizes in northern Ethiopia: an implication for climate change mitigation. Agriculture & Food Security, 11(1). [Accessed Mar 2025]
[190] Government of Ethiopia: Ministry of Agriculture and Rural Development (2007). Forest Development, Conservation and Utilization Policy and Strategy. [Accessed Mar 2025]
[191] Rimhanen, K., Ketoja, E., Yli-Halla, M., & Kahiluoto, H. (2016). Ethiopian agriculture has greater potential for carbon sequestration than previously estimated. Global Change Biology, 22(11), 3739–3749. [Accessed Mar 2025]
[192] Bayata, A., & Mulatu, G. (2024). Carbon farming, climate smart agriculture practice and current climate change mitigation strategy- in the case of Ethiopia. International Journal of Environmental Monitoring and Analysis, 12(6), 149–156. [Accessed Mar 2025]
[193] Eastern Africa Alliance. (2022). Carbon Market Profile - Ethiopia. [Accessed Feb 2025]
[194] *Ibid*
[195] *Ibid*

Furthermore, Ethiopia has 35 registered VCM activities that have issued over 10 million emission reduction units, with the forestry sector having the highest issuances with over 9.1 million credits issued under Voluntary Carbon Standards (VCS) highlighting a vibrant carbon market activity.[196]

Furthermore, the development of a carbon market framework through the NCMS by the MoPD to guide Ethiopia's participation in both international and domestic carbon markets, aligning with Article 6 of the Paris Agreement is timely. With experience with CDM and voluntary carbon market programs as carbon market mechanisms, NCMS aims to leverage this experience to meet its long-term low-emission development targets.[197]

Box 4: Carbon Credit Pricing in Ethiopia Compared to Kenya and South Africa

The differences in carbon credit pricing is reflected by the varied levels of market maturity, regulatory frameworks, and project types in a country. Ethiopia's market is still growing, while Kenya and South Africa have more established systems that attract higher prices for carbon credits.

Ethiopia's carbon credit market is still developing, with prices influenced by various factors such as project type, verification standards, and market demand. The average price of carbon credits in Ethiopia ranges from US$ 5 to US$ 10 per ton of CO2 equivalent (tCO2e), depending on the project's quality and certification.[198]

Kenya has a more established carbon credit market, driven by robust natural resources and a supportive regulatory framework. The average price of carbon credits in Kenya is slightly higher, ranging from US$ 7 to US$ 15 per tCO2e. This is due to the country's diverse ecosystems and successful implementation of projects like reforestation, renewable energy, and sustainable agriculture.[199]

South Africa's carbon credit market is well-developed, with a strong regulatory framework and active participation in international carbon markets. The average price of carbon credits in South Africa ranges from US$ 10 to US$ 20 per tCO2e. The country's carbon tax and offset allowance system also contribute to higher prices, as companies seek to reduce their tax liabilities through carbon credits.[200]

The following table summarises relevant examples, parties involved, advantages and challenges as well as potential mitigators:

<table>
<tr><th colspan="4">Relevant Examples in Developing Countries</th></tr>
<tr><td colspan="4">The Northern Kenya Rangelands Carbon Project (NKRCP), led by the Northern Rangelands Trust (NRT), is an initiative that aims to remove 50 million tons of CO2 from the atmosphere over a period of 30 years.[201]

Tanzania's Yaeda-Eyasi Landscape Project under a community-driven model. The model involves indigenous communities protecting forests and generating carbon credits, with the benefits of carbon credits directly supporting local development.[202]

Ghana’s example of successful engagement in bilateral agreements for Internationally Transferrable Mitigation Outcomes (ITMOs) with Switzerland serves as a model for establishing clear and transparent frameworks for international cooperation with dedicated governance to oversee and coordinate ITMOs activities with the Environmental Protection Agency (EPA) and the Ministry of Environment, Science, Technology & Innovation (MESTI).[203]</td></tr>
<tr><th>Parties involved</th><th>Advantages</th><th>Risks / Challenges</th><th>Mitigators</th></tr>
<tr><td>● Issuers
● Project developers
● Project funders (Investors)
● Buyers
● Intermediary buyers
● Third-Party Auditors (Verifiers)
● Standards organisations
● Local communities
● Government institutions</td><td>Generates revenue for reforestation, renewable energy, and sustainable practices and incentivises emission reductions.</td><td>● Additionality Issues: Difficulty verifying genuine emissions reductions.
● Permanence Risks: Benefits may be reversed (e.g., deforestation, disasters).
● Fraud/Complexity: Risk of miscalculations or fraudulent activities.</td><td>● Verification Processes: Use third-party audits to ensure credibility.
● Insurance Mechanisms: Protect against permanence risks with reserve funds.
● Regulatory Frameworks: Clear rules reduce uncertainty and fraud.</td></tr>
</table>

[196] *Ibid*
[197] Eastern Africa Alliance. (2022). Carbon Market Profile - Ethiopia. [Accessed Feb 2025]
[198] Telaye, A., Benitez, P., Tamru, S., Medhin, H., Toman, M., & World Bank. (2019). Exploring carbon pricing in developing Countries: A Macroeconomic analysis in Ethiopia. [Accessed Mar 2025]
[199] Amboko, J. (2023, September 1). Kenya’s plan to unlock carbon credit market. Business Daily. [Accessed Mar 2025]
[200] Thompson, G. (2024, November 6). How Do Carbon Credits Work in South Africa | First Energy.co.za. First Energy Solar Installers. [Accessed Mar 2025]
[201] Northern Kenya Rangelands. (2023). Carbon Project. [Accessed Feb 2025]
[202] Ceccon, M. (2024, December 9). Virtuous Cycle: Rural Tanzanian communities thrive through High-Integrity Carbon Credits. Nature4Climate. [Accessed Apr 2025]
[203] UNDP (2020). Advancing the Paris Agreement through Cooperative Approaches: The Ghana-Switzerland case study. In UNDP NDC Support Programme (p. 14) [Report]. UNDP.

			● Community Involvement: Ensures equitable benefits and long-term success.

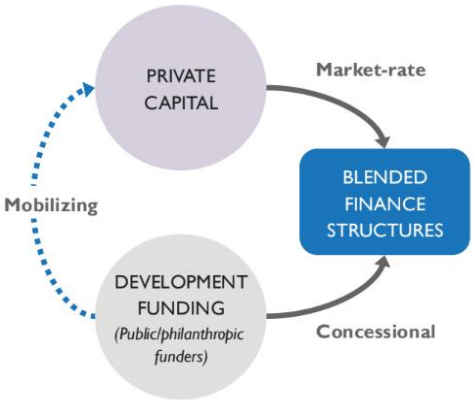
Source: Author

Ethiopia has adopted the Standardized Crediting Framework (SCF) to streamline emissions reductions and conversion into carbon credits. This framework allows Ethiopia to engage in Article 6 transactions, facilitating private sector investment and enhancing local economic growth through renewable energy projects. Over 2 million carbon credits have been issued in Ethiopia from the Clean Development Mechanism (CDM) and VCM standards.[204] However, the country lacks a mechanism to implement benefit sharing on the ground. Despite this, Ethiopia has already generated approximately U$150 million from carbon trading initiatives over the past decade, with an ambitious target of U$100 million in revenue from carbon trade by 2030, primarily through its forestry sector.[205] The Ethiopian government is promoting carbon trading as part of its Nationally Determined Contributions (NDCs) under the Paris Agreement, indicating a strong commitment to engaging in international carbon markets and enhancing local capacities for carbon credit generation.

Rank 2: Blended Finance (BF) Facilities and Transactions

BF Facilities and Transactions are a financing structuring approach for sustainable development projects that have high social and environmental impact but low financial returns or high risks. These facilities combine public, philanthropic, and private capital to support pro-poor investments and sustainable development projects such as renewable energy, sustainable agriculture, green infrastructure, and climate-resilience projects. This approach combines concessional and commercial funding to reduce risk and enhance financial viability. It typically involves guarantees, loans, or equity investments with risk-sharing mechanisms, attracting public, philanthropic, and private sector investors, and can be utilised to enhance existing financial instruments such as thematic bonds.

Figure 11: Illustrative representation of a blended finance transaction



Source: Convergence Finance

BF is characterized by three key features: leverage, impact, and the expectation of a positive financial return. Leverage refers to the amount of commercially priced capital mobilized by each unit of concessional capital. **Impact** is the extent to which the underlying financed activity contributes to the SDGs in a developing country, though not all parties are required to have development intent. The expectation of a positive financial return can range from concessional to market rate, depending on the type of private sector investor involved. Blended finance structures can be organized at various levels, including:

Project Level: Public and private capital is combined within the financial structure of a single project or company.

The Kikagati Hydropower Project is a 15.57 MW hydroelectric power station located on the Kagera River, along the border between Uganda and Tanzania providing renewable energy to both countries, enhancing energy security and promoting sustainable development. The project was developed by Kikagati Power Company Limited, a joint venture between the Norwegian company TrønderEnergi and the Ugandan company Norfund. TrønderEnergi and Norfund provided equity financing for the project; debt

[204] Eastern Africa Alliance On CarbonMarkets And Climate Finance. (2022). Carbon Market Profile Ethiopia. [Accessed Feb 2025]
[205] DGB Group. (2023). Ethiopia's carbon trading ambitions: a green path to prosperity. [Accessed Feb 2025]

financing from the Netherlands Development Finance Company (FMO) and the Emerging Africa Infrastructure Fund (EAIF) of the Private Infrastructure Development Group (PIDG) with PPP between the private sector developers and the governments of Uganda and Tanzania, ensuring regulatory support and facilitating cross-border cooperation. Voith Hydro, a German engineering company, provided technical expertise and equipment for the construction and operation of the power station.[206]

Fund Level: Public and private investors pool their resources into a fund, which then invests in multiple projects or companies.

The African Local Currency Bond Fund (ALCB Fund) that supports the development of local currency bond markets in Africa by investing in corporate bonds issued by financial institutions and companies in developmental sectors. ALCB Fund acts as an anchor investor to attract local investment, providing support to lower transaction costs and boost capital market development. The fund has invested US$ 323 million to date, mobilizing US$ 3 billion in private sector co-investment and supporting 95 investments across 16 countries.[207]

Climate Investor One (CIO) is an US$ 850 million blended finance vehicle designed to accelerate the development, construction, and implementation of renewable energy infrastructure projects in emerging markets. The structure includes a Development Fund that provides reimbursable loans for early-stage project development; Construction Equity Fund offering equity financing during the construction phase, divided into three tiers (first-loss equity, subordinated equity, and senior equity), and a Refinancing Fund that provides senior debt for refinancing completed projects. SCIO aims to support around 30 projects, adding 1.7 GW of renewable energy capacity and avoiding 1.9 million tons of CO2 emissions.[208]

Fund-of-Funds: A fund that invests in other funds.

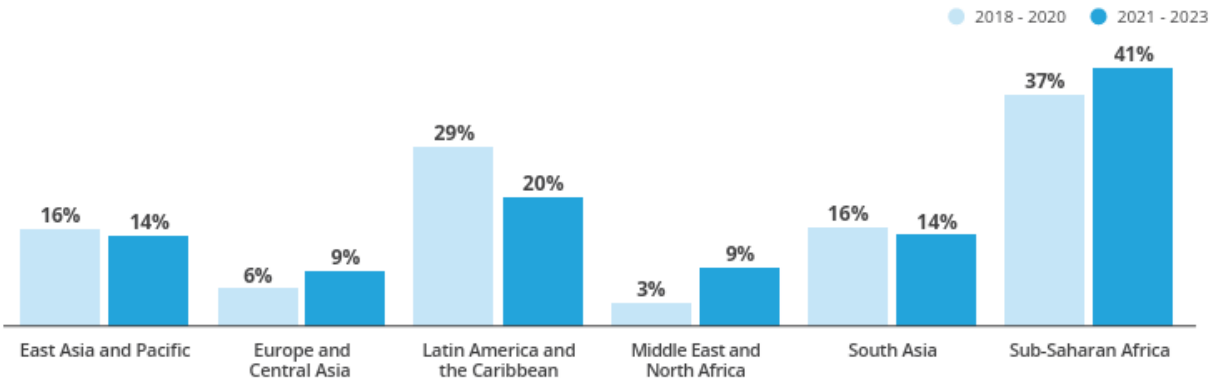
The Global Energy Efficiency & Renewable Energy Fund (GEEREF) is a fund-of-funds that leverages public sector funds to catalyze private sector investment into clean energy projects. It utilises PPPs to combine public and private capital with equity investments focusing on renewable energy and energy efficiency projects. GEEREF aims to provide access to sustainable energy, combat climate change, and deliver financial returns.[209]

NMB Bank - NASIRA program, supported by the European Union and FMO, provides guarantees to financial institutions to support lending to underserved segments, including women, youth, and migrant entrepreneurs. The structure includes a Risk-Sharing Facility that reduces the risk for financial institutions and Targeted Lending focusing on high-impact segments. The program has enhanced access to finance for underserved groups, promoting inclusive economic growth.[210]

Across Sub Saharan Africa, there has been an uptick of blended climate finance transactions, driven by private capital flows.[211] Sub-Saharan Africa was the target of 41% of climate-blended finance transactions between 2021 and 2023, either directly or through multi-regional initiatives. Despite extensive investment opportunities in sustainable agribusiness and renewable energy in the region, industries are still challenged in attracting private investment due to actual and perceived risks, as well as small ticket sizes.[212] Blended finance is increasingly used to attract investment in these sectors, as shown by the 80% increase in deal activity between 2018-2020 and 2021-2023. However, these blended climate finance transactions were mainly concentrated in Nigeria (21) and Kenya (17), with Ethiopia attracting 6 blended climate finance transactions, including the Assela Wind Power Project, Tulu Mole Geothermal Plant, the financing of the Vision Fund Microfinance Institution (VFMI) and the acquisition of aircraft for Ethiopian Airlines.[213]

[206] Kubwa, M. (2024, January 7). Kikagati Hydroelectric Power Project Commissioned as Tanzania-Uganda Joint Power Project Achieves Major Milestone. Constructionreview. [Accessed Mar 2025]
[207] ALCB Fund - Home. (n.d.). [Accessed Mar 2025]
[208] Convergence Finance & Climate Investor One (CIO) (2021, December) Case Study: Climate Investor One (CIO). [Accessed Mar 2025]
[209] GEEREF - Home. (n.d.). [Accessed Mar 2025]
[210] FMO signs USD 11 mln NASIRA guarantee to NMB Bank, supporting Tanzanian MSME sector. (2023, February). [Accessed Mar 2025]
[211] State of Blended Finance 2024: Climate Edition - Convergence Resources | Convergence. (2024). [Accessed Mar 2025]
[212] *Ibid*
[213] State of Blended Finance 2024: Climate Edition - Convergence Resources | Convergence. (2024). [Accessed Mar 2025]

Figure 12: Status of blended climate finance across regions



Source: Convergence Finance

In Ethiopia, the operational feasibility of Blended Finance Facilities is hindered by limited technical capacity and regulatory frameworks. However, successful examples like the Assela Wind Power Project demonstrate potential.[214] Ethiopia's reforms, including prioritizing macro reforms and liberalizing exchange rates, have created an enabling environment. The establishment of clear PPP (Public-Private Partnership) policies and regulatory framework has been crucial in supporting the development of PPPs, enhancing transparency and efficiency in project procurement and implementation. Despite these positive developments, examples of successful project implementation are rare, indicating a significant gap between demand for financing sustainable projects and the capacity to implement them successfully. Nevertheless, BF Facilities and Transactions align with Ethiopia's development plan and commitment to environmental sustainability and concessional financing, making them a potentially viable green financing option. The following table summarises relevant examples, parties involved, advantages and challenges as well as potential mitigators:

Relevant Examples in Developing Countries			
Indonesia's Just Energy Transition Partnership (I-JETP) aims to mobilise $20 billion in public and private financing over three to five years to support Indonesia's transition to renewable energy. It involves grants, concessional loans, market-rate loans, guarantees, and private investments.[215]			
Parties involved	**Advantages**	**Risks / Challenges**	**Mitigators**
● Development finance institutions ● Private sector investors ● Government agencies ● Philanthropic organizations	Reduces risk for private Investors, enhances project viability and supports sustainable development.	● Limited technical capacity for project preparation. ● High reliance on international grants. ● Weak integration with domestic financial markets.	● Capacity-building programs for government agencies. ● Establishing clear governance frameworks. ● Promoting public-private partnerships to enhance private sector involvement.

Source: Author

3.2 Ethiopia's project pipeline review

The country's project pipeline is diversified across several sectors and aims to provide environmental solutions for Ethiopia's most pressing needs. Here, we used an existing database[216] housed under the NDC Partnership to inform our project profile analysis.

[214] Convergence. (2023). How Blended Finance Can Enable Ethiopia To Regain Its Place As Africa's Growth Engine. [Accessed Feb 2025]
[215] PWC. (2024). Tapping into the power of blended finance. [Accessed Feb 2025]
[216] This database outlines climate-related projects in Ethiopia, spanning various sectors like agriculture, cross-cutting initiatives, energy, land use (FOLU), industry, and water. The database includes project names, descriptions, timelines, implementation status, funding sources, and development partners. It also details funding needs in both US dollars and Ethiopian Birr.

Table 13: Project pipeline by sectors

Sector	Pipeline summary
Agriculture	**Projects in this sector, such as SMARTFarm Management, CALM, PACT, Scaling up Climate Ambition on Land Use and Agriculture, and Climate Change Adaptation Growth, are primarily aimed at mitigating exposure to climatic hazards and promoting sustainable management.** These projects typically range in size from US$ 1 million to over US$ 100 million and have durations between 2 to 6 years. Feasible financial instruments to support these initiatives include Climate Fund or National Financing Vehicles (NFVs), Transition bonds, Green bonds, Carbon credits, Green loans, Catastrophe (CAT) bonds, and Fixed Income Bonds for Climate Resilience (FIBCR).
	The Lowlands Livelihood Resilience Project and the Enhancing National Capacity for Livestock Sector Development project aim to enhance livelihood resilience. They have budgetary requirements ranging from US$ 10 million to over US$ 100 million. Green loans and Impact bonds are the recommended financial instruments for these projects.
Forestry and Other Land Uses (FOLU)	**This sector tackles issues related to land and ecosystem degradation and exposure to climatic hazards.** Projects such as REDD+ Investments, Sustainable Urbanization and Resilience, Forest Sector Transformation, and Forested Landscape Program are examples. They typically require between US$ 1 million to US$ 50 million for periods between 2 to 12 years. Sale of carbon credits, thematic bonds, and BF facilities and transactions are suitable financial instruments for these projects.
Industry	**The Circular Economy and Greening Industrial Parks projects aim to drive sustainable transformations in the industry sector.** The project budgets range from US$ 1 million to 10 million and are typically implemented over a period of 1 to 7 years. Thematic bonds, PPPs and impact bonds are the feasible financial instruments for these projects.
Power	**Renewable Energy Investment, Renewable Energy Access, and Energy Access Finance are projects designed to promote sustainable transformations in the energy sector.** The funding requirements for these projects range from under US$ 1 million to US$ 50 million, with implementation periods between 1 to 4 years. Suitable financial instruments for these projects include thematic bonds, Transition bonds and PPPs.
Water	**Projects in this sector aim to improve the provision of Water, Sanitation, and Hygiene (WASH) services.** Examples include the Rural and Urban Water, Sanitation, and Hygiene (WASH) projects, the Berbere WASH project, Strengthening Climate Resilient Systems, and the Solar Sanitation Project. These projects have funding requirements ranging from US$ 1 million to over US$ 100 million, with periods ranging from 3 to 6 years. Water funds, Impact bonds, and Securitization for the water sector are the recommended financial instruments for these projects.
Transport	**Projects in this sector aim to develop sustainable and resilient transport systems while addressing urban mobility challenges and reducing GHG emissions.** Examples include the Electric Bus Rapid Transit (E-BRT) Project, Addis Ababa Transport Systems Improvement Project (TRANSIP), and E-Mobility Initiatives. These projects are generally large, requiring funding of over US$ 100 million, with long periods ranging from 5-10 years. thematic bonds, sovereign and municipal, PPPs and impact bonds are recommended financial instruments for these projects.

Source: Author

Detailed project pipeline analysis is presented in Annex 3.

4 | Conclusion and recommendations

4.1 Conclusions

This draft scoping study on green financial instruments in Ethiopia examines the country's market, policy, regulatory, investment, and financing environment to provide insights and recommendations for developing suitable green finance instruments. From the background, we find that Ethiopia's economy faces significant exposure to climate and disaster risks, primarily due to its dependence on agriculture and low adaptive capacity. With a GDP of US$ 163.7 billion and a population heavily reliant on rainfed agriculture, the country ranks among the most vulnerable to climate changes. Ethiopia endures diverse climatic conditions which significantly impact its agriculture-centric economy. Recurrent droughts, exacerbated by climate change, lead to severe socio-economic disruptions. Addressing water scarcity and managing extreme weather events are immediate environmental challenges.

Fiscal challenges persist marked by a high public debt ratio and recent defaults on external debts, stressing the need for sustainable financial strategies. However, opportunities lie in strengthening fiscal health through innovative green finance mechanisms supported by international partnerships. The commitment to a Climate Resilient Green Economy (CRGE) and other national initiatives highlights Ethiopia's dedication to integrating green strategies into its economic framework. The potential for green bonds, carbon credits, and other sustainable instruments is recognized as crucial for financing these ambitions.

Despite these ambitious goals, several challenges hinder the effective mobilization and utilization of green finance, necessitating a comprehensive assessment of the enabling environment. The assessment focused on four main frameworks to analyze the current state and effectiveness of Ethiopia's green finance policies: economic and fiscal needs, credit risk profiles, green activity levels, and capabilities for enabling green capital markets. These frameworks facilitate a structured evaluation of policy alignment with national goals and their capacity to mobilize necessary resources for climate change mitigation and adaptation.

> **Under economic and fiscal needs,** as highlighted earlier, Ethiopia's economy is heavily reliant on agriculture, making it susceptible to climate-related risks. The study identifies a critical need for policies that mobilize sufficient climate finance to support sustainable agricultural practices and infrastructure resilient to climate change. The fiscal analysis reveals a growing public debt burden, emphasizing the importance of efficient resource mobilization and the potential role of thematic bonds and other sustainable financing instruments to alleviate fiscal pressures.
>
> **Under credit risk profiles,** existing green finance initiatives face challenges with credit risk mitigation, partly due to inadequate financial market development and regulatory frameworks. Strengthening these areas could enhance investor confidence and attract more significant private sector investment.
>
> **Under green activity levels,** while there are commendable levels of activities aimed at environmental sustainability, the assessment underscores the need for more robust mechanisms to track and evaluate these activities. Enhancing data availability and analytical capabilities could improve policy decisions and attract further investments.
>
> **Under green finance capabilities for enabling capital markets,** the study highlights Ethiopia's nascent capital market as a potential platform for green finance but notes the market's limited current capacity to support complex green financial instruments. Developing this infrastructure is essential for the long-term success of Ethiopia’s green finance ambitions.

The study also assessed a range of green financing options, including Funding/Investment, Results-based financing, and other financing instruments, including risk-sharing instruments, each designed to support environmentally sustainable economic activities in Ethiopia. The study identified relevant financial instruments for channeling green finance through both domestic and international capital markets. A comprehensive list of potential instruments was established and assessed based on a set of criteria including feasibility, legal framework compatibility, market demand, political landscape, impact, and cost. Instruments such as thematic bonds (including GSS, SLBs and blue bonds), sustainability-linked bonds, and innovative mechanisms like insurance-linked securities were evaluated for their applicability and potential effectiveness in Ethiopia.

The financial instruments were scored to help prioritize instruments that are most likely to succeed in the Ethiopian context. Based on the scoring and validation workshop with ECMA and other stakeholders, thematic bonds (GSS, SLBs and Blue bonds), National Green / Climate Funds /Banks/Vehicles/Platforms and Impact bonds, emerged as a top choice due to their structured

use of proceeds which aligns with Ethiopia's green objectives. Sale of carbon credits and blended finance (BF) facilities and transactions also ranked highly for their potential to mobilize significant amounts of green and sustainable finance.

Rank 1: Thematic Bonds (Green, Social, and Sustainable (GSS) Bonds, Sustainability-Linked Bonds (SLBs), and Blue Bonds) are specifically designed to fund projects with environmental and social benefits. They are categorized based on their focus:

GSS Bonds: These bonds fund projects that have clear environmental or social impacts, such as renewable energy installations or community development programs.

SLBs: The financial terms of these bonds are directly linked to the issuer's achievement of predetermined sustainability objectives, providing an incentive for corporate issuers to meet their sustainability targets.

Blue Bonds: Similar to green bonds, but specifically used for financing marine and freshwater projects, supporting sustainable fisheries, pollution control, and other aquatic ecosystem projects.

These bonds align with Ethiopia's goals of fostering a green economy by channelling capital towards projects that mitigate environmental risks and promote sustainability. They offer the potential to raise significant capital by tapping into the growing global interest in sustainable investment products, thus providing a robust mechanism for funding Ethiopia's green projects.

Rank 1: National Green / Climate Funds / Banks/ Vehicles / Platforms are specialized financial vehicles designed to support climate and environmental initiatives through grants, loans, equity investments, and other financial instruments. They blend public and private sources of finance to support nationally determined contributions to climate action. By providing targeted financial support for green projects, these funds help operationalize Ethiopia's CRGE strategy. Furthermore, they can act as catalytic instruments for attracting additional investments into green projects, leveraging limited public funds to mobilize substantial private investment.

Rank 1: Impact Bonds are innovative performance-based investment instruments where returns to investors are contingent on achieving a set of predefined impact targets. They are particularly suitable for Ethiopia's green finance landscape as they ensure that funding is directly linked to measurable environmental or social outcomes. Furthermore, they can mobilize private capital for projects that might otherwise be considered too risky or unprofitable, thus expanding the financial resources available for green initiatives.

Rank 2: Sale of Carbon Credits via certificates issued to organizations that reduce their emission of greenhouse gases. These credits can be sold to other entities to offset their emissions, under compliance schemes or on voluntary markets. The sale of carbon credits can incentivize the reduction of emissions in sectors such as agriculture, forestry, and energy, aligning with Ethiopia's commitments under international climate agreements. This mechanism can generate significant revenues that can be reinvested into further climate action initiatives, fostering a self-sustaining cycle of investment and emission reductions.

Rank 2: Blended Finance (BF) Facilities and Transactions are a structured financing approach that combine capital with different risk-return profiles to fund projects with high developmental impact but potentially lower financial returns. BF facilities and transactions are well-suited to Ethiopia's context where high-impact green projects may not always be commercially viable without concessional finance. By reducing the risk and enhancing the potential returns of green investments, BF facilities can attract a broader range of investors, significantly increasing the capital available for sustainable development projects in Ethiopia.

The study also reviewed Ethiopia's project pipeline across sectors like agriculture, renewable energy, and water management. It identified funding needs, estimated costs, and proposed timelines for implementing green projects. This analysis is crucial for aligning financial instruments with specific project requirements and ensuring that the financing strategies are tailored to meet Ethiopia's sustainable development goals.

Overall, the scoping study provides a comprehensive analysis of the current landscape and outlines strategic interventions that can significantly enhance the development of green and sustainable finance in Ethiopia. By addressing the highlighted challenges and leveraging the opportunities for improvement, Ethiopia can make substantial progress towards achieving its green growth and climate resilience goals. Furthermore, the proposed financing instruments are critical in aligning Ethiopia's financial strategies with its sustainability goals. By effectively implementing these tools, Ethiopia can enhance its capacity to fund vital green projects, driving progress towards a sustainable and resilient future.

4.2 Recommendations

Overall recommendations from the study include:

A. Enabling environment (policy and regulation)

1. **Development of a more cohesive regulatory framework** to support green finance instruments, developing capacity among local stakeholders, and fostering international collaborations to leverage financial and technical resources.
    a. **Developing clear guidelines, standards, and regulations** specifically for green financial instruments.
    b. **Establishing clear policies and incentives** to attract both local and international investors into Ethiopia's green market is essential.
2. **Implementing sound macroeconomic policies** that promote stability and investor confidence. Measures to reduce inflation, manage debt, and improve the business environment are crucial. Additionally, long-term planning for robust sustainability investment plans and blended investment vehicles can help create fiscal space and attract funding for national priorities on favourable terms.
3. **Continuous monitoring and adapting policies** to the evolving environmental and economic landscape will be necessary. Promoting research and development in sustainable technologies and practices can further strengthen Ethiopia's resilience to environmental risks.
4. Improving communication and coordination mechanisms between different levels of government and relevant agencies.
    a. **Strengthening local government capacity** is also essential. This will over the long-term enable municipal financing of critical green growth assets that falls under the local governments mandate.

The enabling environment assessment suggests significant opportunities to enhance the enabling environment for green finance in Ethiopia through policy reforms, capacity building, and strategic international collaborations. Recommendations include the development of a more cohesive regulatory framework, increased focus on financial education and stakeholder engagement, and leveraging international green finance networks to build local expertise and capabilities.

B. Capacity building across the ecosystem

1. **Engaging a broad spectrum of stakeholders**, including government bodies, financial institutions, and international partners, is crucial.
2. **Building capacities and raising awareness** about the benefits and mechanisms of green finance among these stakeholders will be vital for the successful implementation of recommended strategies.
3. **Investing in training and capacity building programs for financial institutions** including support for development of the investment banking and related intermediary and transaction advisory services, government agencies, and other stakeholders.
4. **Knowledge transfer** from countries with more experience in green finance can also help.
5. **Investing in data collection and monitoring systems** to improve the accuracy and availability of emissions data and land-use metrics

C. Development of financing instruments

1. **Creating a national climate strategy, and a national "green finance taxonomy"** to define environmentally sustainable activities and investments, as well as guidelines for issuance of sustainable securities developed by ECMA and the Ethiopia Stock Exchange can also help. The national green taxonomy should focus on the key national priority sectors/activities (as per the CGRE; agriculture, deforestation, power, and transport).
2. **Creating incentives and de-risking mechanisms** to encourage private sector investment in green projects. The report has identified 5 key instruments for consideration for this purpose. Public-private partnerships (PPPs) play a key role in the success of these instruments.
3. **Raising awareness and providing education and outreach programs** to inform financial sector and private sector players including the investor base about the benefits and opportunities of green finance.

Annex 1 | Database of policy assessment

Title	Lead Institution(s)	Estimated implementation timeline:	Key Policy Objectives	Link
Ethiopia's Climate-Resilient Green Economy: **Green economy strategy**	MoPD and EPA	2011-2025	• Achieve middle-income status while developing a climate-resilient green economy by 2030	https://www.mopd.gov.et/media/climate-documents/crge-strategy_2011.pdf
Ethiopia's Climate-Resilient Green Economy: **Water and Energy**	MoWE and MoPD	-	• Enhance water and energy resilience to climate change, support green economy initiatives.	https://www.mofed.gov.et/media/filer_public/05/cf/05cf1525-f484-4ff2-93dc-9ba0b8b7e060/water-and-energy_cr.pdf
Ethiopia's Climate Resilient **Transport Sector Strategy**	MoT and MoPD	-	• Promote sustainable transport systems, reduce emissions.	https://www.mofed.gov.et/media/filer_public/15/31/153174c3-b472-4339-b3bb-fb2c48cad629/transport_cr.pdf
Ethiopia's Climate Resilient Green Economy: **Agriculture and Forestry**	MoA and MoPD	-	• Improve agricultural productivity, protect forests, enhance climate resilience.	https://www.mofed.gov.et/media/filer_public/7a/1d/7a1d4fcb-5c44-49f9-9abf-30e5bfcd7a10/agri-and-forestry_cr.pdf
Ethiopia's Climate Resilient Green Economy **National Adaptation Plan**	EPA	2019 - 2030	• Enhance resilience and adaptive capacity to climate change • Reduce vulnerability to climate impacts across sectors (agriculture, water, health, etc.) & regions • Strengthen institutional frameworks and coordination mechanisms • Promote sustainable development goals (SDGs)	https://www.mopd.gov.et/media/climate-documents/NAP-ETH_2019.pdf
Ten Year Development Plan: A Pathway to Prosperity	MoPD	2020 - 2030	• Achieve rapid and broad-based economic growth • Foster structural transformation and industrialisation • Promote sustainable development and green growth • Enhance human capital and institutional capabilities	https://cdn.climatepolicyradar.org/navigator/ETH/2020/10-year-development-plan-2020-21-2029-30_a2d8133452521d68b0a48c0a2caa5f95.pdf
Ethiopia's Long-Term Low Emission and Climate Resilient Development Strategy (2020 - 2050)	MoPD	2020-2050	• Provide a roadmap to achieve low-emission development pathways, fostering green growth and climate resilience • Promote sustainable land management and reforestation • Enhance renewable energy generation and energy efficiency	https://unfccc.int/sites/default/files/resource/ETHIOPIA_%20LONG%20TERM%20LOW%20EMISSION%20AND%20CLIMATE%20RESILIENT%20DEVELOPMENT%20STRATEGY.pdf
Updated Nationally Determined Contributions (NDCs)	EPA	2021- 2030	• Reduce GHG emissions by 68.8% by 2030 compared to the BAU scenario • Enhance climate resilience in key sectors including agriculture, forestry, and energy • Mobilise green finance to support mitigation and adaptation actions • Contribute to achieving Ethiopia's long-term vision of carbon-neutral and climate-resilient development	https://www.mopd.gov.et/media/climate-documents/Ethiopias_updated_NDC_JULY_2021_Submission_.pdf

Annex 2 | Database of financing options

Financial Instrument (FI)	Type of FI	Description of FI	Stage 1: Screening		Stage 2: Ranking							Score
			Relevant for capital markets outside Ethiopia?	Relevant for capital markets in Ethiopia?	Operationality Feasibility /Actionability	Legal Feasibility within ECMA	Legal Feasibility outside ECMA	Existence of demand	Political Feasibility /Actionability	Impact & Additionality	Cost	
			Y/N	Y/N	20%	10%	10%	25%	5%	20%	10%	(1-4)
Thematic bonds - Green, Social and Sustainable (GSS) bonds; Blue Bonds; Sustainability-Linked Bonds (SLB Bonds)	Debt instrument	Ordinary Debt Capital Market (DCM) issuance with certification on the sustainable use of proceeds. / Green bonds where the proceeds are exclusively applied to finance or re-finance new and/or existing eligible green projects. / Blue bonds are issued to finance projects that have positive environmental and climate benefits, particularly related to the ocean and water resources. They enable governments and organizations to raise capital for initiatives aimed at improving water quality, enhancing marine biodiversity, and promoting sustainable fisheries. / SLBs financial and/or structural characteristics are tied to predefined sustainability or Environmental, Social, and Governance (ESG) objectives	**Yes**	**Yes**	3.0	3.0	3.0	3.0	4.0	3.0	3.0	***3.1***
National & Subnational Climate Funds (CFs) or Financing Vehicles (FVs) or Investment Platforms (IPs)	Funding / Investment	A financial facility which provides finance in the form of grants, concessional loans, equity investment, etc to initiatives that aim at addressing the challenges related with climate change; initiatives that strive towards mitigation and or adaptation activities.	**Yes**	**Yes**	3.0	4.0	3.0	3.0	3.0	3.5	2.0	***3.1***
Impact bonds	Results-Based Financing	Bonds where repayment and returns are contingent on achieving specific outcomes or impacts, often used for green projects that require innovative financing solutions.	**Yes**	**Yes**	3.0	3.0	3.0	2.5	4.0	4.0	2.5	***3.1***

Financial Instrument (FI)	Type of FI	Description of FI	Stage 1: Screening		Stage 2: Ranking							Score
			Relevant for capital markets outside Ethiopia?	Relevant for capital markets in Ethiopia?	Operationality Feasibility /Actionability	Legal Feasibility within ECMA	Legal Feasibility outside ECMA	Existence of demand	Political Feasibility /Actionability	Impact & Additionality	Cost	
			Y/N	Y/N	20%	10%	10%	25%	5%	20%	10%	(1-4)
Sale of carbon credits	Results-based payment mechanisms	Businesses can buy permits – or carbon credits – generated by projects that are reducing pollution to our atmosphere, to compensate for the emissions they haven't yet eliminated. There's scepticism around the quality of some carbon offsetting projects but, when done well, they support local economies and fund work that is making a real impact.	**Yes**	**No**	3.0	2.0	4.0	3.0	4.0	3.0	2.0	***3.0***
Blended Finance Facilities	Development finance	A financial structuring approach that combines public, philanthropic, and private capital to support pro-poor investments and sustainable development projects.	**Yes**	**Yes**	3.0	4.0	3.0	2.5	4.0	3.0	3.0	***3.0***
Other Thematic bonds: Transition bonds	Funding / Investment	Transition bonds are investments that are not yet low- or zero-emission (i.e. not green) but have a short-term role to play in decarbonising an activity or supporting an issuer in its transition to Paris Climate Agreement alignment.	**Yes**	**No**	2.0	3.0	2.0	2.0	3.0	3.5	2.5	***2.5***
B-bond (aka Bridge-to-Bond)	Debt instrument	A short-term debt instrument used to finance a project or initiative with the intention of refinancing it with a longer-term bond in the future.	**Yes**	**No**	2.0	3.0	3.0	2.0	4.0	3.0	1.5	***2.5***
Fixed Income Bonds for Climate Resilience (FIBCR)	Debt instrument	Bonds specifically designed to finance projects that improve resilience against climate-related risks, such as infrastructure upgrades, flood defences, or climate-resilient agriculture.	**Yes**	**No**	2.0	3.0	3.0	1.0	4.0	3.0	2.5	***2.3***
Securitization structures (e.g. Solar ABS)	Funding / Investment	A financial security issuing repayment arrangement tied to project cash flow. / *Solar ABS are securitisations secured on cash flows from solar assets. Most deals are backed by lease payments and power purchase agreements. Some are backed by loans extended to fund the acquisition and installation of solar panels.	**Yes**	**No**	2.0	2.0	2.0	2.0	4.0	3.0	1.5	***2.3***

Financial Instrument (FI)	Type of FI	Description of FI	Stage 1: Screening		Stage 2: Ranking							Score
			Relevant for capital markets outside Ethiopia?	Relevant for capital markets in Ethiopia?	Operationality Feasibility /Actionability	Legal Feasibility within ECMA	Legal Feasibility outside ECMA	Existence of demand	Political Feasibility /Actionability	Impact & Additionality	Cost	
			Y/N	Y/N	20%	10%	10%	25%	5%	20%	10%	(1-4)
ESG indices	Funding	These indices track the performance of companies engaged in environmentally sustainable practices. They provide a benchmark for investors and facilitate investment flows into green sectors through index funds traded in capital markets.	**Yes**	**No**	2.0	4.0	3.0	1.0	4.0	2.0	2.0	***2.2***
Climate index insurance	Other	Innovative approach to insurance provision that pays out benefits based on a predetermined index (e.g. rainfall level) for loss of assets and investments, primarily working capital, resulting from weather and catastrophic events.	**Yes**	**No**	3.0	2.0	1.5	1.5	3.0	2.0	2.0	***2.1***
Green Sukuk bonds	Debt instrument	Sharia-compliant financial instruments designed to finance environmentally sustainable projects. They combine the principles of Islamic finance with the objectives of green bonds, ensuring that the funds raised are used for projects with positive environmental impacts	**Yes**	**Yes**	1.0	1.0	3.0	1.0	2.0	4.0	2.5	***2.0***
Debt swaps	Debt instrument	Debt swaps involve the exchange of a portion of a country's foreign debt for commitments to invest in local environmental projects. This mechanism allows countries to reduce their debt burden while simultaneously funding initiatives that promote conservation	**Yes**	**No**	1.0	1.0	2.0	3.0	2.0	2.0	2.0	***2.0***
Green credit guarantees	Other	Designed to reduce the risk for lenders by providing a guarantee on loans made to environmentally sustainable projects.	**Yes**	**No**	3.0	2.0	1.5	1.5	2.0	1.0	1.0	***1.7***
Insurance Linked Securities (ILS) / Catastrophe Bonds (Cat-bonds)	Insurance linked debt security	Catastrophe bonds (CAT bonds) are a type of insurance-linked security that transfers specific risks, typically natural disaster risks, from a sponsor (e.g., an insurance company, government, or NGO) to investors	**Yes**	**No**	1.0	1.0	3.0	1.5	2.0	2.0	2.0	***1.7***

Financial Instrument (FI)	Type of FI	Description of FI	Stage 1: Screening		Stage 2: Ranking							Score
			Relevant for capital markets outside Ethiopia?	Relevant for capital markets in Ethiopia?	Operationality Feasibility /Actionability	Legal Feasibility within ECMA	Legal Feasibility outside ECMA	Existence of demand	Political Feasibility /Actionability	Impact & Additionality	Cost	
			Y/N	Y/N	20%	10%	10%	25%	5%	20%	10%	(1-4)
Green Real-Estate bonds	Debt instrument	Debt securities issued to finance or refinance real estate projects that have positive environmental impacts. These bonds adhere to specific guidelines to ensure that the proceeds are used for green initiatives, such as energy-efficient buildings, renewable energy installations, and sustainable water management systems	**Yes**	**Yes**	1.0	1.0	1.0	1.0	2.0	3.0	2.0	***1.6***
Thematic loans - GSS, Blue and Sustainability-linked	Funding / Investment	Loans issued with the defined labels / Green loans where the debt is provided exclusively to finance or re-finance new and/or existing eligible green projects. / Blue loans where the debt is provided exclusively to finance projects that have positive environmental and climate benefits, particularly related to the ocean and water resources. / SL loans where the debt is provided exclusively to customers with predefined sustainability or Environmental, Social, and Governance (ESG) objectives	**No**	**No**								***0.0***
Water funds	Funding / Investment	A water fund is a financial mechanism that pools resources from public, private, and community stakeholders to invest in upstream conservation activities that protect and enhance water resources for downstream users.	**No**	**No**								***0.0***

For full detail of each of the instruments, please refer to the Database (Excel document) shared in the sheet “2. Financial Instrument (FI)”.

Annex 3 | Database of project pipelines

Sectoral Scope	Environmental Need covered	Project examples	Project sizes	Project Periods	Stakeholders	Feasible capital market instrument
Agriculture	Exposure to climatic hazards and sustainable management	SMARTFarm Management: Data-driven solutions for climate resilience, crop productivity, and food security.	US$ 1 million to 10 million	Between 2-6 years	(lead) Ministry of Agriculture Ethiopia Forestry Development Agency Environmental Protection Authority (EPA) Ministry of Irrigation and Lowlands Ministry of Finance Ministry of Planning and Development IFAD GIZ UNDP	• Climate Fund or National Financing Vehicles (NFVs)
		CALM: The program will help Ethiopia address international and national policy commitments that seek to address climate resilience and mitigation goals and promote the sustainable management of natural resources.	Over US$ 100 million			• Climate Fund or National Financing Vehicles (NFVs) • Transition bonds
		PACT: Participatory Agriculture and Climate Transformation Programme (PACT) aims to contribute to poverty reduction and improved resilience in selected landscapes/woredas.	Over US$ 100 million			• Climate Fund or National Financing Vehicles (NFVs)
		Scaling up Climate Ambition on Land Use and Agriculture: The project aims to support Ethiopia in translating the priorities included in their NDCs/NAPs into actionable transformative climate solutions.	US$ 1 million to 10 million			• Green bonds • Carbon credits
		Climate Change Adaptation Growth: The objective of the proposed LDCF project is to mainstream and strengthen climate risk considerations into federal, regional and Woreda-level planning processes so that local communities across the Ethiopian highlands are more resilient to climate change.	US$ 1 million to 10 million			• Green loans • Catastrophe (CAT) bonds • Fixed Income Bonds for Climate Resilience (FIBCR)
	Livelihood resilience	Lowlands Livelihood Resilience Project: The proposed project aims to enhance livelihood resilience at scale in the most marginalised regions of Ethiopia.	Over US$ 100 million			• Green loans
		Enhancing National Capacity for Livestock Sector Development: To generate a fundamental transformational change in the scale, quality, diversity and socio-economic benefit of the nation's livestock sector.	US$ 10 million to 50 million			• Impact bonds
Forestry and other Land Uses (FOLU)	Land and ecosystem degradation	REDD+ Investments: These projects aim to reduce deforestation and forest degradation, and promote sustainable forest management, including expanding the capacity for innovation and private sector engagement.	US$ 1 million to 10 million	Between 2-12 years	(lead) Ethiopia Forestry Development Agency Ministry of Agriculture GGGI UNEP UNDP GCF GGGI	• Carbon credits • Green stock indices
	Land and ecosystem degradation	Sustainable Urbanization and Resilience: This program in Addis Ababa seeks to beautify the Sheger area through integrated watershed management and sustainable urban land	US$ 10 million to 50			• Green bonds • Green loans • Blended finance facilities

Sectoral Scope	Environmental Need covered	Project examples	Project sizes	Project Periods	Stakeholders	Feasible capital market instrument
		use planning.	million		KOICA	
	Exposure to climatic hazards	Forest Sector Transformation: This project supported the Forest Sector Transformation Unit in Ethiopia to improve and climate-resilient forest livelihoods while maintaining carbon stocks and ecosystem services.	N/A			• Carbon credits • Green stock indices
	Land and ecosystem degradation	Forested Landscape Program: This program in the Oromia region aims to reduce greenhouse gas emissions and enhance sustainable forest management.	US$ 10 million to 50 million			• Carbon credits • Green stock indices
Industry	Sustainable Transformation in Industry	Circular Economy: Promoting circular economy practices within the textile and garment sector through sustainable chemical and waste management.	US$ 1 million to 10 million	Between 1-7 years	(lead) Ministry of Industry GEF UNIDO	• Green loans • Transition bonds
		Greening Industrial Parks: Developing roadmaps for existing and new industrial parks to incorporate sustainability.	N/A			• Transition bonds • Green bonds • B-bond (aka Bridge-to-Bond)
Power	Sustainable Transformation in Energy	Renewable Energy Investment: Supporting solar PV energy investment within industrial parks, specifically addressing electricity shortages with sustainable solutions.	Under US$ 1 million	Between 1-4 years	(lead) Ministry of Water and Energy UNEP GCF	• Transition bonds • Green bonds • B-bond (aka Bridge-to-Bond)
		Renewable Energy Access: Scaling up commercial investment in renewable mini-grids to increase clean energy access.	US$ 10 million to 50 million			• Transition bonds • Green bonds • B-bond (aka Bridge-to-Bond)
		Energy Access Finance: Developing a framework for energy access finance, including gender action plans, to improve funding accessibility.	N/A			• Green loans • Transition bonds • Impact bonds
Water	Provision and improvement of Water, Sanitation, and Hygiene (WASH) services	Rural Water, Sanitation, and Hygiene (WASH): Aims to provide equitable access to basic WASH services for children and families in rural areas by 2025, including during humanitarian crises. The project also addresses climate change, disaster risks, and environmental degradation.	Over US$ 100 million	Between 3-6 years	• (lead) Ministry of Water and Energy • UNDP • UNICEF	• Water funds • Impact bonds
		Urban Water, Sanitation, and Hygiene (WASH): Aims to provide equitable access to basic WASH services for children and families in urban areas by 2025, including during humanitarian crises. The project also addresses climate change, disaster risks, and environmental degradation.	US$ 10 million to 50 million			• Water funds • Impact bonds

Sectoral Scope	Environmental Need covered	Project examples	Project sizes	Project Periods	Stakeholders	Feasible capital market instrument
		Berbere WASH project: Aims to expand access to climate-resilient and inclusive WASH services for vulnerable communities in Berbere Woreda, Oromia Region, Ethiopia.	US$ 1 million to 10 million			• Water funds • Impact bonds
		Strengthening Climate Resilient Systems: The proposed SCRS – WaSH programme will contribute to the GoE's Climate Resilient (CR) WaSH provision to drought-prone areas.	Over US$ 100 million			• Solar securitization for the water sector • Water funds • Impact bonds
		Solar Sanitation Project: Uses solar-powered filtration systems to provide clean water and improve public health in rural Ethiopia, reducing water-drawing labour for women and children.	US$ 1 million			• Solar securitization for the water sector • Water funds • Impact bonds
Transport	Sustainable and resilient transport systems	Electric Bus Rapid Transit (E-BRT) system in Addis Ababa: Targeting reduced GHG emissions and eased road congestion using an e-BRT system across 15 corridors, with the B2 corridor currently under construction and plans for B3 and B4 corridors. The system aims to serve over 400,000 residents.[217]	US$ 200 million	5-7 years	(lead) Addis Ababa Road and Transport Bureau Ministry of Transport and Logistic Ministry of Finance Ministry of Water, Irrigation and Electricity	Impact bonds PPPs Thematic bonds
		Addis Ababa Transport Systems Improvement Project (TRANSIP):Targeting improved mobility along selected corridors in Addis Ababa while enhancing road safety compliance systems throughout Ethiopia. This is achieved by upgrading infrastructure, improving traffic management, and enhancing public transport services.[218]	US$ 300 million	7 years		

Source: Project examples, sizes and period have been drawn from Ethiopia's NDC Partnership Online Partnership Plan Tool (OPPT)

[217] Sustainable Urban Transport Project for Ethiopia by proposing innovative solutions for electric bus rapid transit (E-BRT). (n.d.). GGGI - Global Green Growth Institute. [Accessed Mar 2025]
[218] The World Bank. (2019). Implementation Status & Results Report Ethiopia: Transport Systems Improvement Project (TRANSIP) (P151819). [Accessed Mar 2025]

Annex 4 | Takeaways from the stakeholder validation workshop

Area of the study	Stakeholder comments, feedback and remarks
Enabling environment	The strengths of the existing policy framework should also be featured across the report. It was noted that the SWOT analysis presented under table 7 highlights this, though more needs to be done for a coordinated policy, regulatory and institutional environment.
	The ongoing National Carbon Market Strategy (NCMS) has also been updated across the sections noting the Ministry of Planning and Development as the lead agency. Section 2.2.1: Page 14; Table 9
	It was suggested that the study specifies at least two countries that Ethiopia can benchmark for immediate learning. The study has already covered this on section 2.2.5 benchmarking. Table 6: page 23 and 24 of the report also covers the strongest learning points from selected countries, with coverage on achievements/bets lessons to Ethiopia and financial instruments/financial mechanisms.
Project pipeline	N/A
Financing instruments	Ethiopia has recently launched the ESX, which is a platform that can be used in the trading of these instruments
	Ethiopia has made significant progress in establishing a framework for carbon markets. It is largely missing from the report. This has been addressed, with updates under the following sections: Section 1.3: Page 8-9; Section 2.2.1: Page 14; and Section 3.1.2: Page 38

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