



ETHIOPIA CLIMATE CHANGE LEGISLATIONS AND DATA REQUIREMENT AT THE NATIONAL LEVEL

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ECA

Outline

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Introduction

Introduction

- Ethiopia is most vulnerable to climate change and extremes mainly due to its location, dependency of climate change sensitive sectors and low adaptive capacity.
- Climate change and extremes such as drought, flood, and temperature extremes, delaying of rainfall onset, early rainfall cessation, and high rainfall intensity have been compromising the sectors' performance and causing poverty and food insecurity.

Introduction

- Thus, land degradation, shortage of pasture, water scarcity and pollution, the prevalence of epidemic pests and disease, infestation of invasive species, resource-based conflict, and migration are some of the manifestations of the direct and indirect impact of climate change and extremes.
- Overall, the cumulative effects of climate change worsen poverty and food insecurity which in turn would further erode adaptive capacity.

Introduction

- The EPA has, the following powers and duties:
 - ✓ Prepare a mechanism that promotes social, economic and environmental justice and channel the major part of any benefit derived thereof to the affected communities to reduce emissions of greenhouse gases that would otherwise have resulted from deforestation and forest degradation.
 - ✓ Coordinate actions on soliciting the resources required for building a climate resilient green economy in all sectors and at all governance levels as well as provide capacity building support and advisory services.

Climate Change Legislations

Climate Change Legislations

- Ethiopia has proactively mainstreamed, aligned the SDGs with the Second Growth and Transformation Plan (GTP II) which spans from 2015/16 to 2019/20 and implementing.
- Ethiopia has established climate change legislations, policies, plans, and institutions at national and sub-national levels.

Climate Change Legislations

- Ethiopia's policy framework for climate change mitigation and adaptation has progressively evolved since the ratification of the UNFCCC in 1994.
- More than 70 climate and environment related strategies, policies, programs including the national policy measures and international conventions have been in place in Ethiopia.

Climate Change Legislations

- There were in place as Ethiopia's pledge to control the impacts of climate change in the country Prior to the CRGE strategy. These were:
 - ✓ The Ethiopian Constitution,
 - ✓ The Environmental Policy of Ethiopia in 1997
 - ✓ The Environmental Impact Assessment Proclamation in 2002
 - ✓ The Rural Development Policy and Strategies (RDPS) in 2003,

Climate Change Legislations

- ✓ The 2007 Forest Management, Development and Utilization Policy
- ✓ The Forest Development, Conservation and Utilization Proclamation (542/2007)
- ✓ The National Adaptation Plan of Action (NAPA) in 2007 (Ethiopian Meteorological Agency, 2007) and
- ✓ Ethiopian Program of Adaptation to Climate Change (EPACC) in 2011 and
- ✓ Nationally Appropriate Mitigation Actions in 2010

Climate Change Legislations

- Broadly, the climate change policies, plans, and legislations include:
 - ✓ Development of climate- compatible medium and long-term national plans,
 - ✓ Climate Resilient Green Economy Strategy,
 - ✓ National Adaptation Plan,
 - ✓ The Nationally Determined Contribution,
 - ✓ CRGE climate finance facility,

Climate Change Legislations

- ✓ REDD+ strategy in 2008, and
- ✓ National Forest Sector Development Program.
- ✓ At the sub national level, local governments are also developing their climate change response plans which have prioritized climate change agendas and adaptation and mitigation measures (Endalew, 2016).
- ✓ These all efforts demonstrate not only Ethiopia's desire to grow economically and become a middle-income country, but also its ambition to build a low carbon and climate resilient economy.

Climate Change Legislations

- However, the CRGE Strategy (2011) is the first national policy document on strategically focused climate change responses (Echeverria & Tertton, 2016).

Climate Change Legislations

- To address climate related challenges, there was a need for stronger climate change adaptation policies, programs and implementation capacity across sectors, levels of intervention and actors (MoA 2014; MoWE, 2015).

Climate Change Legislations

- The vulnerability of the Agriculture sector to climate change has urged the Ethiopian government:
 - ✓ To design strategies to mitigate the possible impacts of climate change.
 - ✓ Hence, mitigation and adaptation activities have been already included in the sectoral plans and various initiatives.

Climate Change Legislations

CRGE (2011)

- The National Climate-Resilient Green Economy (CRGE), which was approved in 2011 to better outline and design implementation strategies for GHG reduction alternatives.
- CRGE serves as the main framework for GHG emission mitigation.
- The CRGE aims to promote green growth, low-carbon emission, and high economic growth and create a society that is climate resilient.

Climate Change Legislations

- The critical programs in the Agriculture sector are:
 - ✓ The agriculture growth program
 - ✓ The livestock master plan
 - ✓ Livestock and fisheries sector plan
 - ✓ The sustainable land management program and
 - ✓ These programs also included in the national adaptation plan.

Climate Change Legislations

NAP (2007)

- NAP is a critical part of the CRGE that focuses on adaptation programs taken by each sector to build climate resilient economy.
- Ethiopia has put in place several initiatives with the potential to contribute to climate change mitigation and assessment measures to reduce the emissions of GHGs and /or enhance their sinks.
- As indicated in CRGE, the country is committed to work on reducing vulnerability of Climate change impacts through strengthening holistic integration of climate change adaptations in development policies and strategies at the national as well as Regional and District levels.

Climate Change Legislations

- National Adaptation Plan (NAP) addresses climate change in the country's development policy framework including the CRGE strategy as well as sectoral climate resilience strategies regional and municipal adaptations plan.
- NAP implementation roadmap (2019) specified 40 adaptation interventions.
- Ethiopia is ensuring the legacy initiative to surpass its goal of planting 20 billion trees under the Green Legacy Initiative by the Prime Minister, which enhances carbon sink.

Climate Change Legislations

- Integrating climate change adaptation and mitigation strategies, policies and Ethiopia's National Adaptation Plan (NAP–ETH) into the national development plans along with monitoring their implementation is shouldered by the federal EPA.
- To this end, to successfully integrate, operationalize, and implement the strategies, sector ministries have established environment and CGRE directorates that are directly accountable to the minister.
- Moreover, FEPA has developed a guideline entitled “Integrating the Climate–Resilient Green Strategy in Sector Development Plans” along with the necessary capacity building training helpful to integrate climate change adaptation and mitigation activities in sector annual and medium-term planning.

Climate Change Legislations

EPACC (2011)

- The EPACC has called for the mainstreaming of climate change into decision-making at a national level and emphasized planning and implementation monitoring.
- It identified 20 climate change risks, mainly health risks (human and animal); agriculture production decline; land degradation; water shortages; biodiversity; waste; displacement; and distributive justice.

Climate Change Legislations

EPACC (2011)

- It follows a more programmatic approach to adaptation planning. Seeks to build a climate resilient economy through adaptation at sectoral, regional and community levels.
- The EPACC updates and replaces Ethiopia's National Adaptation Program of Action (NAPA) which was formulated in 2007 and submitted it to the UNFCCC Secretariat (Echeverria & Terton, 2016).

Climate Change Legislations

NDC (2021)

- Ethiopia submitted its Nationally Determined Contributions/NDC to the UNFCCC on June 2015
- Ethiopia's NDCs has specific aims to reduce emission to 145 Mt CO₂eq or lower by 64% from a business-as-usual trajectory by 2030 and

Climate Change Legislations

NDC (2021)

- Also to reduce societal vulnerability to climate shocks by undertaking series of adaptation initiatives.
- Both strategies, CRGE and NDCs, are therefore well aligned to each other and are considered as an implementing mechanism of addressing climate change challenges.

Climate Change Legislations

Ethiopia's long-term low emission and climate resilient development strategy LD-LEDs (2020 - 2050)

- Provide evidence-based, long-term planning for decarbonizing, climate proofing, and modernizing key Ethiopian economic sectors while ensuring a just transition and the creation of economic and decent job opportunities;
- Contribute to policy coherence – linking short-term to long-term goals (to help direct successive NDCs in being more ambitious);
- Facilitate finance and support - Outlines the priorities for attracting international and private-sector financing for green, low carbon, and climate-resilient projects over the near and long term;

Climate Change Legislations

- Ethiopia is making strides to include lessons about climate change in the curriculum.
- With assistance from the United Nations Climate Change Learn, the FEPA conducted preliminary research on the state of climate change learning in the Ethiopian education sector in 2016. (UNCC).
- Higher educational institutions have put substantial efforts into capacity building on climate change by embedding B.Sc., M.Sc, and Ph.D. degree programs in Climate Change.



**Climate change
Data Requirement
at National Level**

Climate Change Data Requirement

- With existing natural variability and the shifting of mean states, however, Ethiopia has endured many climate-driven disasters of varying scales— all of which have common features of snatching lives and assets, adding to the pains of underdevelopment and deprivation nationwide.
- Numerous studies have documented the climate of Ethiopia to have changed, exhibiting high degrees of variability across time and spatial scales. Such changes and variability in the climate system have been noted to be accompanied by increased frequency and intensity of climate driven hazards.

Climate Change Data Requirement

- While projected changes in precipitation are mostly uncertain across the Greater Horn of Africa, there is predicted to be a substantial decrease in rainfall over the central and northern parts of Ethiopia.
- Additionally, the length of dry spells is projected to increase while the length of wet spells is expected to decrease. The probable impacts of these changes on key sectors such as the agriculture, water, energy, and health sectors will likely call for formulation of actionable policies geared towards adaptation and mitigation of the impacts of 1.5⁰C and 2⁰C warming.

Climate Change Data Requirement

- For a country like Ethiopia, whose economy and the livelihoods of millions of its citizens are dependent on the weather and climate, designing and implementing an overarching framework for climate services is of paramount importance.
- Ethiopia has decided to launch a National Framework for Climate Services (NFCS).
- The development of the NFCS is a step in the right direction towards enhancing Ethiopia's commitments and capacity towards climate change adaptation, mitigation and resilience. The NFCS-E can deliver these through structured and coordinated provision of relevant climate data.

Climate Change Data Requirement

- Meteorological quality of data collected across the country, ensuring the accessibility of climate data to internal and external users and monitoring the climate of the country.
- Production of meteorological forecast and early warning services encompassing short, medium, and long-range weather and climate prediction, plus early warning information on meteorological extremes.
- Assessing the impact of the past and future weather condition on agriculture, water and health sectors and developing and sharing relevant advisories.
- Growing sensitivity of livelihoods to weather and climate variability coupled with recent improvements in the reliability of scientific weather forecasts have contributed to increasing demands for high quality climate services.

Climate Change Data Requirement

- Observational data through the addition of weather stations and hydro-meteorological instrumentation
- Hydro-meteorological data and project impacts across sectors
- Providing timely early warning systems
- Early warning systems about dangerous hydro meteorological phenomena and climate risk management
- The Ethiopian Meteorology Institute (EMI) has officially launched the implementation phase of the Systematic Observations Financing Facility (SOFF), a global initiative aimed at strengthening climate adaptation and resilience through improved weather and climate data collection.

Climate Change Data Requirement

- To support climate change action, Ethiopia collects and requires a range of data across various sectors:
- **Greenhouse Gas (GHG) Emission Data:**
 - Ethiopia needs accurate GHG inventories to monitor emissions from different sectors like agriculture, transport, industry, and energy.
 - The government, in partnership with international organizations, has been working on improving GHG data collection, reporting, and verification systems.

Climate Change Data Requirement

Data (Temperature, Precipitation, and extreme events):

- Accurate weather and climate data are essential for assessing climate impacts and developing adaptation strategies.
- Ethiopia's meteorological data collection efforts have been supported by agencies such as the Ethiopian Meteorological Institute (EMI). This includes rainfall patterns, temperature changes, and extreme weather events (droughts, floods, etc.).

Climate Change Data Requirement

Sector-Specific Data (Agriculture, Water, Health, etc.):

- **Agriculture:** Data on crop yields, soil quality, and pests are vital for understanding climate change's effects on food security.
- **Water Resources:** Monitoring water availability, river flow, and groundwater levels is crucial for managing water stress due to climate change.
- **Health:** Climate data is integrated with health data to assess the spread of diseases influenced by changing climate conditions (e.g., malaria, cholera).

Climate Change Data Requirement

Vulnerability and Adaptation Data:

- Vulnerability assessments are carried out at the national and local levels to determine which populations and regions are most affected by climate change.
- Data on livelihoods, income sources, and poverty levels help tailor adaptation strategies to different regions and communities.

Land Use and Land Cover Change Data:

- Forest cover data and land use patterns are essential for managing Ethiopia's efforts to address deforestation, reforestation, and land degradation.



Conclusion

Conclusion

- In order to manage risks, decision-makers must understand what the risks are and be able to anticipate them.
- A well-functioning climate service has the potential to inform a range of both short- and long-term decisions, contributing to the resilience of governments, organizations, and individuals to current climate variability while also preparing for an uncertain future that may look very different from today.

Conclusion

- Agricultural sector is the backbone of Ethiopian economy which accounts about 36% of the Gross Domestic Products (GDP) and 66% of employment (Bekana, 2018). Nevertheless, the sector is highly affected by current climate variability, uncertainty and extremes and can decrease the GDP significantly (CIAT; BFS/USAID, 2017).

Conclusion

- Rise in average temperatures, changes in rainfall patterns, increasing frequency of extreme weather events such as severe droughts and floods and shifting agricultural seasons have been observed in different agro ecological zone of Ethiopia.

**Thank you For
Listening**