



THE EFFICACY OF CLIMATE CHANGE LAW IN ETHIOPIA

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Abstract

Climate change is continuing all over the world including Ethiopia. This research investigates the efficacy of Ethiopian law in responding climate change. It employed qualitative research methodology whereby international legal instruments as well as literature have been analysed. Relevant national legal instruments and literature have also been investigated. The research found that no comprehensive climate change law is available and the regulation of the issue is left to diverse laws, strategies and plans. It identified that the implementation is not satisfactory, in general. It recommends comprehensive law to be enacted by the Ethiopian Government and bring the duties of regulation into one institute.

Keywords

Climate Change, Climate Change Law of Ethiopia, Mitigation, Adaptation

1) Introduction And Background

Climate change is one of the most difficult challenges of our time.¹ It affects almost everything including the environment, social harmony, social civilization, and ecological balances. It also affects both private and privileges, such as the welfare of the society. Thus, it is important to respond to those climate problems, and law plays essential role in fighting against the climate change problems. States are the main actors which should work so as to minimize the climate change.²

Climate change is related to the issue of atmosphere. The Earth atmosphere allows some electronic radiations to inter into it while reflecting others. The atmosphere stops some long wave infrared radiations from leaving the Earth System. Some gases tend to be opaque to infrared radiations due to their physical properties. The gases present in the atmosphere reflect the proportions of the infrared radiations emitted by the Earth's surface back to the atmosphere, by preventing some of the heat absorbed from the Sun during the day from being released to space. The process makes the Earth temperature comfortable for life, but when the presence of the radiated electromagnets is much more, it increases the temperature.³

This selective opacity to infrared radiations is called the greenhouse effect. Greenhouse prevents airflows. It traps the warmed air and reduces cooling by convection. Cooling of air is made by the circulation of warm air away from the source of heat. On the other hand, by filtering inputs and outputs of electromagnetic radiation, the atmosphere regulates the temperature of the Earth's system. The gases that contribute for the "greenhouse" effect are called greenhouse gases (GHGs), and they include water vapour (H₂O), carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂). Most of the earth's atmosphere is composed of nitrogen and oxygen that are completely transparent and infrared radiations.⁴

The combustion of fuels and other activities of human being have been causing the release of GHGs into the atmosphere. Carbon dioxide is the main GHG produced by human activities. The emission of carbon dioxide since the industrial revolution has been increasing. The increased emission of carbon dioxide into the atmosphere

¹ Benoit Mayer, *The International Law on Climate Change*, (Cambridge University Press, 2018), at 1; see also Maria Jetnnaad, *Governing Climate Change under the Paris Regime*, (Linkoping University, 2021), at 7.

² Benoit, *id.*, at 1.

³ *Id.*, at 2.

⁴ *Ibid.* Michael C MacCraken, "Global Warming: A Science overview", at 1.

has much more warming effect. For example, more than 2 teratons of carbon dioxide (TtCO₂) were emitted as a result of industrial process since 1750.⁵

China has been the largest GHG emitter while United States of America and the European Union also release more carbon dioxide.⁶

Anthropogenic emissions of GHGs into the atmosphere have been so massive that the chemical composition of the atmosphere has been significantly affected. This has the effect to increase the temperature of the Earth. This has been asserted by the scientific researchers.⁷

Human activities such as massive combustion of fossil fuels bring about changes in the composition of the atmosphere and this in turn increases the greenhouse effect and warm the surface of the Earth beyond the pre-industrial range of temperatures. So as to inform states and policy makes on the scientific knowledge on climate change, an institution called the International Panel on Climate Change (IPCC) was created, and this IPCC has conducted series of researches. The researches have concluded that warming of the Earth is evident, which is caused by the increase in the atmosphere concentrations in GHGs, particularly carbon dioxide.⁸

Research has indicated that the temperature increase will increase and catastrophic results would follow unless appropriate response is undertaken.⁹ For instance, the increase in temperature will threaten grain yields, oceans will warm, and trees will die-off.¹⁰

Ethiopia has a diverse landscape and climate including equatorial rainforest with high rainfall and humidity in the South and southwest, the Afro-Alpine on the Semein and Bale Mountains, desert-like conditions in in north east, east and south east lowlands.¹¹ Ethiopia has diverse topographic features.¹² In Ethiopia the climate is categorized into three zones:

- 1) The alpine vegetated cool zones- known as Dega. This includes areas with over 2,600 meters above sea level;
- 2) The temperate –Woina Dega zones which ranges between 1,500 and 2,500 meters above sea level. Here the temperature ranges from 16oc to 30oC.
- 3) The hot Qoala zone that covers both tropical and arid regions and having temperature ranging from 27°C to 50°C.¹³

Ethiopian economy relied on agriculture and forestry which created employment for about 80% of the population. 80% of national emission was emitted from this sector by 2013. The cultivated land of the country is rain feed, which is vulnerable to the climate change.¹⁴

Emission of greenhouse gases has increased in Ethiopia: from 108,333 Gg of CO_{2e} in 1994 to 368,835 Gg of CO_{2e} in 2018. The reason for such increase is said to be the economic development of the country.¹⁵

Poverty is one of the challenges in Ethiopia, where we find about 24% of the population living below poverty line.¹⁶ Ethiopia depends on rain-fed agriculture and natural resources. We also find relatively low adaptive capacity in Ethiopia and these factors make Ethiopia to be the most vulnerable to climate change. Ethiopia faces various challenges in climate change related issues that include low health service coverage, low economic development, inadequate infrastructure, weak institutional structure, lack of awareness, low economic development, under development of water resources, and high population growth rate. Ethiopia has experienced floods and droughts, rainfall variability and increasing temperature that contribute to adverse impacts to livelihood. Soil erosion, deforestation, land degradation, desertification, recurrent droughts, loss of wildlife and biodiversity loss are also primary environmental problems in Ethiopia.¹⁷

⁵ Benoit, *supra note 1*, at 3.

⁶ *Ibid.*

⁷ *Id.*, at 4.

⁸ *Id.*, at 5. See Valerie Masson-Delmotte et al (Eds), *Global Warming of 1.5°C*, (2019).

⁹ Benoit, *supra note 1*, at 3. Climate change would destroy most of both natural and human made systems around the globe. Michael Oppenheimer and Jesse K. Antilla-Hughes, “The Science of Climate Change”, *The Future of Children*, Vol. 26, No. 1, 2016, at 15.

¹⁰ Marie-Claire Cordonier Segger, “Advancing the Paris Agreement on Climate Change for Sustainable Development”, *Cambridge Journal of International and Comparative Law*, (2016), Vol. 5, Issue 2, at 204.

¹¹ World Bank Group, Climate Risk Country Profile: **Ethiopia**, (Washington, DC, 2021), at 2.

¹² Federal Democratic Republic of Ethiopia, *National Ecosystem Assessment of Ethiopia*, Syntheses of the Status of biodiversity and Ecosystem Services, and Scenarios of Change (Ethiopian Biodiversity Institute, Addis Ababa, Ethiopia, 2022), at xvii.

¹³ *Ibid.*

¹⁴ Climate Action Tracker (CAT), Climate Governance Series **Ethiopia**, (December 2020), at 4.

¹⁵ Federal Democratic Republic of Ethiopia, *Ethiopia’s Third National Communication to the United Nations Framework Convention on Climate Change (UNFCCC)*, December 2022, at 5.

¹⁶ World Bank Group, *supra note 11*, at 2-3.

¹⁷ *Id.*, at 3.

Eastern and Southern parts of the country including Somali, and Afar, and Ormomia regions experienced severe droughts several times. On the other hand, Gambella region suffers flooding.¹⁸

In addition, the removal in Ethiopia has increased by 79%, which is the result of intervention on the land subsector by the government in afforestation, reforestation, and forest restoration that is responsible for removal of GHG.¹⁹

In Ethiopia, different laws have been promulgated to respond to the climate change problem. However, this research has revealed that there are some problems. For instance, laws that directly address the climate change issue in the country are limited and too general. In addition, Ethiopia has no relevant and appropriate climate change policy. Further, the implementation of the strategies and laws of climate change law is poor.²⁰

2) Research Questions

This research is aimed at investigating the general question: How efficiently could the Ethiopian Law regulate the human activities to limit the increase of green House gases?

The sub questions include:

- 1) What is the role of climate change law (international and national) to respond to climate change problems?
- 2) How much Ethiopian legal regime is sufficient to regulate the climate change problem?

3) Research Objectives

This research has the purpose to investigating the efficacy of climate change law of Ethiopia. The specific objectives of the research include:

- ✓ Investigating the role of climate change law in responding to the climate change problems; and
- ✓ To evaluate the efficacy of the Ethiopian legal regime to respond to the climate change problem.

4) Role of Climate Change Law in responding Climate Change

Defining the climate change law is imperative before directly treating its role. Climate change law is defined as “the sum of legal standards designed to protect the climate against anthropogenic effects”.²¹ According to this definition, the basic aim of this law is to protect the climate against anthropogenic effects. It is a sum of standards to achieve its objectives. Climate change law is a law that comprises cross-sectoral areas integrated based on objectives and instruments. It includes multilevel legislation with rules that apply at international, regional, and national level. “It is virtually pragmatic for the increasing globalization of environmental law.”²²

Climate change law is the latest branch of environmental law, which has been developed for the response of climate change problem. It was emerged based on scientific, economic, social and political debates over the impacts of greenhouse gas emissions on the global climate system.²³

Regulatory strategies may be categorized into two: strategies to reduce greenhouse gas emissions, and climate change adaptation strategies. The strategy of reducing the greenhouse gas emissions is called climate change law in the strict sense while the climate adaptation strategy is called climate change adaptation law.²⁴

Climate change law includes international treaties and new legislation aimed at directly to regulate climate change. It also encompasses other aspects of existing environmental and other broader legal framework employing them in new manner so as to respond to climate change problem. The law plays essential role in managing climate change. The climate change law, international, and domestic, is an important instrument to respond to climate problem by regulating the behaviour of human being. The law also pays roles in providing forms for mediation between the many different interests and actors involved in the field of climate change policy. Therefore, legal

¹⁸ *Id.*, at 11.

¹⁹ Federal Democratic Republic of Ethiopia, *National Ecosystem Assessment of Ethiopia*, *supra* note 12, at 5.

²⁰ Bilate Bisare Bitre, “Appraisal of climate change mitigation and adaptation regulatory frameworks in Ethiopia and their congruency with the UN climate change convention”, *International Journal of Climate Change Strategies and Management*, 2022.

²¹ Hans-Joachim Koch, “Climate Change Law: Objectives, Instruments and Structures of a New Area of Law”, Open Access, at 156.

²² *Id.*, at 157.

²³ Jacqueline Peel, “Climate Change Law: The Emergence of a New Legal Discipline” *Melbourne University Law Review*, March 2012, at 923.

²⁴ Hans-Joachim, *supra* note 21, at 157.

mechanisms to facilitate participation and to ensure accountability, judicial review and dispute resolution can be employed to promote the quality and social acceptance of climate change initiatives.²⁵

At the international level, United Nations Framework Convention for Climate Change (UNFCCC), the Kyoto Protocol, and the 2015 Paris Agreement are basic laws that regulate climate change.²⁶ The Paris Agreement recognizes the role of national law where it provides, under its preamble that “Recognizing the importance of the engagement of all levels of government and various actors, in accordance with respective national legislations of Parties, in addressing climate change”²⁷ This makes clear that national climate change law is imperative to address climate change, and Parties are required to enact same. Where properly implemented, climate law can limit the increase of climate temperature and thereby it is possible to limit dangerous consequences of climate change.²⁸

In general, international law plays critical role in promoting climate change mitigation and in providing support for climate change adaptation. Treaties, general norms of customary international law are international climate change law. Specific treaties to address climate change, such as UNFCCC, and treaties negotiated under the UNFCCC, have been adopted. Treaties to regulate the GHGs emissions from specific sectors such as international shipping or international aviation are also adopted.²⁹

The coming into being of climate change law introduces changes in the constitutional law, administrative law, and property law.³⁰

Climate Change Law in Ethiopia

Coming to the related literature regarding the Ethiopian Climate Change Law, the recent document in this respect is the “Climate Governance- Ethiopia” undertaken by the Climate Action Tracker in 2020.³¹ This document assesses the climate governance in Ethiopia generally. It does not investigate the climate change laws of Ethiopia in a critical manner, however. Bilate Bisare’s Article on: “Appraisal of climate change mitigation and adaptation regulatory frameworks in Ethiopia and their congruency with the UN climate change convention”,³² is focused on the investigation of Ethiopian climate change law in comparison with the UN Convention. First, the UN Convention, though crucial in the regulation of international climate change, is not the only international instrument to which Ethiopia is a party to regulate climate change. To fill this gap, the current research investigates the Ethiopian law from international aspects as well that are aimed at responding to climate change problems and their efficacy to respond to the climate change in Ethiopia.

Michael Nachmany and others also have written on the Ethiopian Climate Change law entitled: “Climate Change Legislation in Ethiopia: An Excerpt from the 2015 Global Climate Legislation Study A Review of Climate Change legislation in 99 Countries”.³³ This piece is also a general overview of climate change law in Ethiopia, and it does not treat the efficacy of the law. Further, a paper written by Emilie Cesar and Andrs Ekbohm, on: “Ethiopia Environmental and Climate Change policy brief”³⁴ is a policy brief rather than a research.

Generally, there is no literature that investigates the role of law in responding the problem of climate change in Ethiopia and its efficacy. Therefore, this research fills this gap by considering the efficacy of the law.

Ethiopian Law

Ethiopia is a signatory to various Multilateral Environmental Agreements: it signed/or ratified the United Nation Framework for Climate Change (1994),³⁵ the Convention on Biological Diversity (1994), the United Nations Convention to Combat Desertification (1994), the Cartagena Protocol on Bio-Safety to the Convention on Biological Diversity (2000), and the Stockholm Convention on Persistent Organic Pollutants.³⁶ Ethiopia also

²⁵ Jacqueline , *supra note 23*, at 927.

²⁶ See Maria, *supra note 1*, at 8.

²⁷ Paris Agreement, FCCC/CP/2015/10/Add.1, Preamble, Para. 8.

²⁸ Marie-Claire, *supra note 10*, at 204. Climate Change Law has become a recently emerged law having its own legal principles that will help to respond to the problem of climate change. See the Japan Branch of Committee on Climate Change, The legal Principles relating to Climate Change, preliminary issues on the Methodology and scope of the work, July 2009. On the Legal principles of Climate Change see Hendrik A. Strydom, “The Legal principles relating to Climate Change”, *Encyclopedia of Life Support System (EOLSS)*.

²⁹ Benoit, *supra note 1*, at 12.

³⁰ Jacqueline, *supra note 23*, at 924.

³¹ *Climate Action Tracker, Climate Governance- Ethiopia, (December 2020)*.

³² Bilate, *supra note 20*.

³³ Michael Nachmany and others, *Climate Change Legislation in Ethiopia: An Excerpt from the 2015 Global Climate Legislation Study A Review of Climate Change legislation in 99 Countries*

³⁴ Emilie Cesar and Andrs Ekbohm, *Ethiopia Environmental and Climate Change Policy brief*, 2013.

³⁵ See Michal Nachmany et al, *Climate Change Legislation in Ethiopia (An Excerpt From The 2015 Global Climate Change Legislation Study A Review of Climate Change Legislation in 99 Countries)*, at 3.

³⁶ Emelie Cesar and Anders Ekbohm, *Ethiopia Environmental and Climate Change policy brief*, (2013), at 11; See also UNEP/CBD, *Voluntary-peer review under the Convention on Biological Diversity Test Case 1: Ethiopia* (2016), at 10.

ratified the Kyoto Protocol to the United Nations Framework Convention on Climate Change (2005), and the Paris Agreement.³⁷

According to the FDRE Constitution, the international agreements that Ethiopia has ratified are considered as laws of the Country.³⁸ Therefore, the international Conventions on Climate Change that are ratified by Ethiopia are part of the Ethiopian legal regime, and should be applied to regulate issues related to climate change.

The FDRE Constitution, though not clearly provide about the climate change, incorporates environmental provisions. It provides environmental rights and accordingly all persons have the right to live in a clean and healthy environment.³⁹ This constitutional provision would enable us to protect the environment from climate change since climate change is the consequence of the environmental pollution in general and the greenhouse gas emissions in particular.

Where climate change problems, including the emission of greenhouse gases, are regulated the right to live in a clean and healthy environment will be ensured. The government is duty bound to ensure that all Ethiopians live in a clean and healthy environment.⁴⁰

The environmental policy aspires for the protection of atmosphere and climate. It also provides that greenhouse gas emission should be monitored and the country should shift to clear energy such as geothermal, and wind.⁴¹

The revised environmental policy also envisaged the implementation of climate change adaptation and mitigation strategies and programs. It also aspires to ensure the implementation of adaptation and mitigation at the federal and regional levels by mainstreaming them into development strategies and programmes.⁴²

Further, to respond to climate change, the Ethiopian government has enacted diverse laws and strategies as well as programmes. The Addis Ababa City Government established a project office on the Addis Ababa City Government Rivers and River Sides Development and Climate Change Adaptation. This law recognises that the City has become exposed to regional as well as international climate change.⁴³ It also aspires to prevent climate change in the City.⁴⁴

The Environmental Protection Authority is responsible for the synergetic implementation of the international agreements related to environment and forest and their implementation at all levels and in all sectors.⁴⁵ The Authority is responsible for the initiation and coordination of the formulation of policies, laws, strategies, programmes and guidelines to implement international agreements to which Ethiopia is a party and their implementation.⁴⁶ Generally, it is the Environmental Protection Authority that is duty bound to ensure the enactment and implementation of laws to regulate the human behaviour so as to respond to the climate change problems.

Core Mechanisms of Climate Change Law

Adaptation to Climate Change

Climate change is already underway, and it may be difficult to avoid it. In addition to climate change mitigation, it is essential to use adaptation. Adaptation is defined as the “process of adjustment to actual or expected climate and its effect” so as “to moderate or avoid harm or exploit beneficial opportunities”.⁴⁷ Thus it is possible to develop and introduce drought-resistant food crops to minimize the associated risks. Laws, policies and programmes could promote climate adaptation such as in the case of development programmes.⁴⁸

International law plays critical role in promoting climate change mitigation provide support for climate change adaptation. Treaties, general norms of customary international law are international climate change law.

³⁷ Federal Democratic Republic of Ethiopia, *National Ecosystem Assessment of Ethiopia*, *supra note 12*, at 283; See also the Paris Agreement Ratification Proclamation, Proclamation No. 993/2017, *Federal Negarit Gazette*, 23rd Year, No. 16, Addis Ababa, 6th February 2017.

³⁸ FDRE Constitution, Constitution of the Federal Democratic Republic of Ethiopia Proclamation No. 1/1995, *Federal Negarit Gazette*, 1st Year No. 1, Addis Ababa 21st August, 1995., Art. 9(4).

³⁹ *Id.*, Art. 44(1).

⁴⁰ *Id.*, Art. 92(1).

⁴¹ Federal Democratic Republic of Ethiopia, *Environmental Policy* (April 2, 1997), at 3.9.

⁴² Federal Democratic Republic of Ethiopia, *Environmental Policy* (Revised, 2016), at 4.5.

⁴³ The Addis Ababa City Government Rivers and River Sides Development and Climate Change Adaptation Project office Regulation No. 75/2015, *Addis Negari Gazette*, Eighth Year No. 75, Addis Ababa December 18, 2015, First paragraph of the Preamble.

⁴⁴ *Id.*, second Paragraph of the Preamble.

⁴⁵ Definition of Powers and Duties of the Executive Organs of the Federal Democratic Republic of Ethiopia, Proclamation No. 1097/2018, *Federal Negarit Gazette*, 25th Year No. 8, Addis Ababa, 29th November, 2018, Art. 32(3) (f) and Definition of Powers and Duties of the Executive Organs of the Federal Democratic Republic of Ethiopia, Proclamation No. 1263/2021, *Federal Negarit Gazette*, 28th Year No. 4, Addis Ababa, 25th January, 2022, Art. 89 (3).

⁴⁶ Proclamation No. 1097/2018, *Id.*, Art. 32(3) (h).

⁴⁷ Benoit, *supra note 1*, at 11.

⁴⁸ *Ibid.*

Specific treaties to address climate change, such as UNFCCC, and treaties negotiated under the UNFCCC, have been adopted. Treaties whether with regard to GHGs emissions from specific sectors such as international shipping or international aviation are also adopted.⁴⁹

5) Research Methodology

To investigate the above mentioned questions, the research employed comparative research methodology. Thus, the international legal principles are considered to bench mark the required regulatory principles so as to regulate the increase of greenhouse gases or the climate change law in Ethiopia. Furthermore, the Ethiopian climate change law instruments, including the policies as well as the strategies and programmes are investigated.

Mitigation and Adaptation

Mitigation and adaptation are strategies to respond to the climate change problem. Laws and policies would foster the efforts of climate change controlling activities. Climate change mitigation and adaptation are two essential efforts to climate change.⁵⁰

Climate Change Mitigation

Laws and policies can promote the efforts of GHGs reducing efforts from their sources. They can also seek to remove GHGs enhancing sinks and reservoirs. Reducing sources of GHGs emission is the most obvious method to mitigate climate change. It would be possible to employee sector specific measures as power generation, automobile, cement production and waste disposal. Improving efficiency can reduce the emission of GHGs. Coal plants can use the most available technology to reduce the GHGs emission.⁵¹

Mitigation

The Paris Agreement requires governments to commit themselves to mitigate the temperature by 45% below 2010 levels by 2030 and reduced to net zero around 2070.⁵²

Climate “mitigation” refers to “measures taken to reduce greenhouse gas (GHG) emissions with the goal of decreasing, or “mitigating” the severity of anthropogenic global warming”.⁵³ Mitigation focuses on cutting greenhouse gas emissions. Mitigation requires efficient energy production and use, employing efficacy in production and transportation sectors.⁵⁴

The Southern Nations, Nationalities, and Peoples Regional State (SNNPRS) environmental law aspires for the use of renewable resources and reduction of greenhouse gas emissions.⁵⁵ This is the first environmental law in Ethiopia that clearly refers to the reduction of greenhouse gas emissions. Thus, other laws should have been clearly addressing the reduction of GHGs as aspect of their regulation. This Regulations defines the ‘climate change mitigation’ as “reducing or preventing the emission of pollutant gases”.⁵⁶

Nationally Appropriate Mitigation Actions (NAMA) are adopted by countries so as to work on decreasing greenhouse gas emissions. NAMA is a strong agent to fight against climate change and it is used as a tool to empower partner countries. Such NAMA has been helping developing countries as a tool to fulfil their obligations to mitigate as incorporated under the Paris Agreement. This is implemented in the Nationally Determined Contributions (NDCs) to the Paris Agreement.⁵⁷

NAMA are voluntary actions taken by developing countries proposals to the United Nations Framework Convention on Climate Change so as to decrease the emission of greenhouse gases. NAMA includes set of actions prioritized to decrease or limit the emission of GHGs.⁵⁸

Ethiopia is not obliged to reduce GHGs under the UNFCCC but is working on it. The data in 2018 indicated that Ethiopia contributed 368.8 Mt CO_{2e} to the total world GHG emission and removed 108.4 Mt CO_{2e}. The net emission of the country is 260.4 Mt CO_{2e} which constitutes about 0.5% of the globe. The land emits CO₂ and CH₄ emitted from livestock while the higher emission was from Agriculture, Forest and Other Land Use

⁴⁹ *Id.*, at 12.

⁵⁰ *Id.*, at 10.

⁵¹ *Ibid.*

⁵² Climate Action Tracker (CAT) Climate Governance Series *Ethiopia*, (December 2020).

⁵³ Karl S. Coplan et al, (eds.), *Climate Change Law: An Introduction* (Foundations of Environmental Law, Edward Elgar, UK, 2021), at 23.

⁵⁴ *Id.*, at 75.

⁵⁵ The Southern Nations, Nationalities and Peoples’ Regional State Regulations No. 175/2019, *Dehub Negarit Gazeta*, 26th Year No. 3, Hawassa December 29/2019, 1st Paragraph of the preamble.

⁵⁶ *Id.*, Art. 2(7).

⁵⁷ IKI Collaborations, *The NAMA Facility A Learning Hub for Climate Action*.

⁵⁸ Louise Bockel et al, *From Nationally Determined Mitigation Actions (NAMAs) to Low-Carbon Development in Agriculture, NAMAs as Pathway to Country Level*, Issue Paper, 2013), at 1.

(AFOLU) sector estimated to be 344.9 Mt and the energy sector emitted about 38Mt, and the Industrial Processes and Product Use (IPPU) emitted 13Mt while the waste sector emitted 8.5Mt.⁵⁹

Ethiopia has put in place plans to reduce and mitigate greenhouse gases at the federal, regional and local levels. The Ten Years plan has the principal objective to mitigate the damage of climate change, and reduce the amount of emission of sectoral greenhouse gases, among others.⁶⁰

Ethiopia is a leading nation in adopting policies and laws to respond to the climate change. Thus, it adopted policies, laws and established institutions at the Federal and regional levels to respond to climate change. Ethiopia adopted Climate –Resilient Green Economy (CRGE) in 2011 which was the first of its kind in Africa. It aspires for Ethiopia to reach middle-income levels by 2025.⁶¹ CRGE is the first national policy document that focused on climate change. The National Adaptation Plan of Action (2007) and Ethiopian Program of Adaptation on Climate Change and Nationally Appropriate Mitigation Actions (2010) were in place as part of Ethiopia's commitment to curb the devastating impacts of climate change in Ethiopia prior to the CRGE.⁶²

The CRGE did not include policies regarding climate adaptation but focuses only on climate mitigation. Ethiopia has a vision to achieve middle-income status by 2025, which needs a strong economic reform to achieve. The CRGE, so as to achieve the vision, *inter alia*, has three objectives vs.: a) fostering economic growth and development; b) ensuring abatement and avoidance of greenhouse gas emissions; and c) improving resilient to climate change.⁶³

The Ten Years Development Plan aims at ensuring the sustainable development of the country by the environmental protection and conservation including natural resources, forests, wildlife, and biodiversity resources.⁶⁴

The National Climate –Resilient Green Economy (CRGE)- which serves as the main framework for GHG emission mitigation, outlines implementations strategies for GHG reduction alternatives. It aspires to promote green growth, low carbon emission, and high economic growth in addition to creating climate resilient society.⁶⁵ Other instruments also include the following:

- 1) National Adaptation Plan (NAP)- provides for the climate resilience strategy to implement the CRGE.⁶⁶ The 2019 NAP implementation road map identified 40 adaptation interventions that will help to mitigate GHG emissions. Ethiopia also has been implementing the plan to plant 20 billion trees under the Green Legacy Initiative, which will contribute for mitigation of GHGs by enhancing carbon sink.⁶⁷
- 2) National Determined Contributions (NDCs 2021)- provides for climate change mitigation through three GHG reduction scenarios vs. the conditional, unconditional, and business as usual pathway.⁶⁸
- 3) Sector specific priority actions- have also been adopted by the Ethiopian Government to mitigate climate change under the amended NDCs. The priorities include large-scale investments in the hydro, solar, wind energy and undertaking the green legacy initiatives and afforestation projects.⁶⁹

Mitigation options identified and proposed include shifting the energy system from carbon emission to clean energy such as the production of energy from hydropower, wind, as well as geothermal power. It also includes the efficient use of energy as well as the renewable resources. In addition, it envisages the use of efficient improved stoves at the house hold level. The use of electric train, as envisaged under the CRGE is the other mitigating mechanism. Using efficient vehicles such as electric car, alternative fuels like bio-diesel, improve the share of blending ethanol-gasohline (gasohol), improve the rural and urban transport infrastructure, promoting mass transport as well as the use of non-motorized transport such as bicycle help to control GHGs in Ethiopia.⁷⁰

⁵⁹ Federal Democratic Republic of Ethiopia, *Ethiopia's Third National Communication to the United Nations Framework Convention on Climate Change (UNFCCC)*, (December 2022), at 8.

⁶⁰ Federal Democratic Republic of Ethiopia, Planning and Development Commission, *Ten Years Development Plan A Path to prosperity (2021-2030)*, at 73.

⁶¹ FDRE, *Climate Resilient Green Economy*.

⁶² Department of Economic and Social Affairs, *Ethiopia*, Capacity building on Climate Change Financing, (October, 2021), at 15.

⁶³ CRGE, *supra note 60*; Emelie Cesar and Anders Ekbohm, *Ethiopia Environmental and Climate Change Policy* brief, 2013, 15.

⁶⁴ Federal Democratic Republic of Ethiopia, *Ten Years Development Plan*, *supra note 59*, at 73.

⁶⁵ Federal Democratic Republic of Ethiopia, Environmental Protection Authority, *Ethiopia's Climate Resilient Green Economy*, (2011), at 20.

⁶⁶ Federal Democratic Republic of Ethiopia, *Ethiopia's Third National Communication to the United Nations Framework Convention on Climate Change (UNFCCC)*, (December 2022), at 8.

⁶⁷ *Id.*, at 8-9.

⁶⁸ *Id.*, at 9.

⁶⁹ *Ibid.*

⁷⁰ *Ibid.*

IPPU- also focuses on the mitigation options from cement production, which includes- addition of specific decarbonated or limestone-free components as raw materials, substituting a portion of clinker with supplementary cementitious materials, using limestone calcinated clay cements.⁷¹

In relation to the AFOLU sector, three categories are available that include livestock, land/forestry and agricultural crops. In livestock sector the mitigation option include pastoral land and rangeland management, improving the livestock production system that includes the feeding diversification and improved animal breeds, enhancing and intensification of animal mix, which includes dairy, poultry, small ruminants, improved breeds, drought resistant animal breeding. It also includes animal health care and productive improvement, Manure management and livestock value-chain efficiency improvement.⁷²

In the land/forestry sector, mitigation option includes improving the management of natural forests and woodlands increase afforestation and re-afforestation. It also includes sustainable forest management, strengthening community-based forestry and sustainable forest management. It focuses on the reducing the demand for fuel wood, low-emission climate smart agriculture and improving agricultural production techniques, improved livestock production, value chain, improving the law enforcement activities to fight deforestation and forest degradation as well as Clean Development Mechanism (CDM).⁷³

In Agriculture, the mitigation option includes, soil carbon storage and management, tillage and residue management, Agroforestry, Nitrogen Management and Smart agricultural practices. It also includes water management, techniques, climate smart agriculture, improve drought-resistant crop varieties, watershed management and rehabilitation as well as eco-system-based adaptation.⁷⁴

Waste sector mitigation options also include implementing integrated solid waste management programme. This includes source reduction, reuse/recycling, composting, and waste to energy system. In addition, the options include, promote sanitary land fill, improve faecal sludge management system, implement integrated water treatment systems, enhance sewer line connection, and promote zero liquid discharge.⁷⁵

Recently, Ethiopia has adopted Long-Term Low Emission and Climate Resilient Development Strategy abbreviated as LY-LEDS (2020-2050), as part of the implementation of the obligation that arises from Paris Agreement so as to limit the GHG emission.⁷⁶ It is believed to integrate the mitigation and adaptation strategies of climate change issues and used as an instrument to achieve the objectives of international climate change law.⁷⁷ Under the Strategy, the vision of the country to develop by mitigating or controlling the emission of GHGs is clearly indicated and is provided that:

“The LT-LEDS will enhance the Ethiopian government’s ability to plan for the decarbonization of its economy by providing a framework and pathway for a progressive revision and enhancement of targets under its NDC to reduce CO₂ emissions and enhance climate resilience”.⁷⁸

This is good since it will help the country to grow in a sustainable manner by controlling the emission of GHGs.

However, the problem is that this is document is a strategy, not a regulation and or a proclamation that imposes a duty to implement on the shoulder of the stakeholders. This indicates that Ethiopia has not a comprehensive law in the area. Ethiopia has no comprehensive Climate legislation.

Ethiopia has been working on the adaptation and mitigation, the two types of climate change responses. Accordingly, it put in place the National Adaptation Programme of Action (NAPA), and Nationally Appropriate Mitigation Action (NAMA).⁷⁹

Adaptation

Adaptation is the reduction of risks from changed climate risks and prepares to reduce the coming climate change effects. It consists of behavioural, technological and structural measures taken at the individual, regional, local, and national levels. Adaptation strategies may include timing (proactive or reactive); local, regional or global in scope; planned or autonomous; and private or public. Adaptation may either be the three strategies: protect, accommodate, and retreat. Protection measures- require protecting the environment as it is.⁸⁰

⁷¹ *Ibid.*

⁷² *Ibid.*

⁷³ *Id.*, at 9-10

⁷⁴ *Id.*, at 10.

⁷⁵ *Ibid.*

⁷⁶ FDRE, Ministry of Planning and Development, (Long-Term Low Emission and Climate Resilient Development Strategy (2020-2050)

⁷⁷ See *id.*, at 13.

⁷⁸ *Id.*, at 18.

⁷⁹ Federal Democratic Republic of Ethiopia, *supra note 12*, at 283

⁸⁰ Karl S. Coplan et al, (eds.), *supra note 53*, at 74.

Accommodation- recognizes that forces of climate change may not be resisted, however, peace must be made with nature. Using efficient technologies would cool the rising heat, using heat and drought resistant crops could help us to resist drought, building the structure in a way to resist flood may resist flood, and addressing changes in disease vector would be made in public health.⁸¹

Retreat measures include the relocation of vulnerable people, considering zoning land as undevelopable, requiring setback and elevations of sites and structures.⁸²

‘Climate change adaptation’ refers “to minimize or mitigate the effects of new or on-going climate change that may be caused by natural or human impacts”.⁸³ According to this definition, adaptation is the minimizing the climate change impacts. These impacts may arise from the on-going or new activities and these activities might be natural or human. Generally, mitigating the consequences of activities that have impacts on the climate is called climate change adaptation.

The Ethiopian adaptation and climate resilient strategies are aimed at increasing adaptation in key sectors including Agriculture, Forestry, electric Power, transport, Industry and buildings.⁸⁴

The Role of Law in adaptation

Law is an important instrument the society to adapt to social, environmental and economic change. The formal and informal rules and the agencies responsible for the designing and implementing rules will affect the time and effectiveness of climate change adaptation strategies.⁸⁵ The first role of law in climate adaptation is facilitation. Adaptation requires the combination of behaviour, attitudinal, economic, and technological and management changes that promote adaptation. Law is an essential vehicle for the implementation of adaptation policies and strategies in different sectors by providing, for instance, rights and imposing duties; designing the architecture for regulating the behaviour and the activities that include the function of government; establish framework for public participation in government decision making; solves disputes that would arise between government and the private individuals as well as between individuals. In addition, law will provide the basis for policies (Strategies) to change behaviours to promote adaptation actions before damage occurs and a framework for responding to losses where damage occurs.⁸⁶

Law regulates to reduce exposure or sensitivity to climate risks. Regulatory measures including licensing, prohibitions, and planning tools are ‘traditional ‘command –and-control’ instruments that will reduce exposure to climate change exposure or sensitivity to extreme weather events. These regulatory regimes can be used in land use planning, natural resource management, emergency management and biodiversity conservation. Land use planning will be the most effective tool to reduce exposure and sensitivity to extreme weather events, such as floods. Similarly, urban planning can limit development in flood, erosion-prone, and bushfire areas. Zoning may also help to control activities not to be undertaken in vulnerable areas.⁸⁷

Ethiopia enacted environmental pollution control laws having the rational to mitigate pollution as a consequence of social and economic development activities.⁸⁸ Environmental Protection Control Proclamation requires permit to undertake certain activities that could pollute the environment, including climate change. For instance, the law requires permit for the generation, storage, transportation, disposal or treatment of any hazardous waste.⁸⁹

In addition, Ethiopia regulates the prevention and control of problems of environmental pollutions from hazardous wastes.⁹⁰ The law has the objective of environmentally sound management and disposal of hazardous wastes.⁹¹ Further, it aimed at preventing the damage to human or animal health and the environment including biodiversity.⁹²

Law also provides for the application of environmental impact assessment before certain projects are implemented. This will minimize or avoid the adverse effect of the development projects on the environment in general, and the climate change as well. The climate change impacts on the proposed development projects will help to justify or not to implement the project; the project should not be costly to the owner of the project.⁹³

⁸¹ *Id.*, at 75.

⁸² *Id.*, at 75.

⁸³ Regulations No. 175/2019, *supra note 55*, Art. 2(7).

⁸⁴ World Bank Group, *supra note 10*, at 3.

⁸⁵ Jan McDonald, “The Role of law in adapting to climate change”, *John Wiley & Sons, Ltd.*, Volume 2, March/April 2011, at 283.

⁸⁶ *Id.*, at 284.

⁸⁷ *Id.*, at 285.

⁸⁸ Environmental Protection Control Proclamation No. 300/2002, *Federal Negarit Gazeta*, 9th Year, No. 12, Addis Ababa- 3rd December, 2002, 3rd Paragraph of the preamble.

⁸⁹ *Id.*, Art. 4(1).

⁹⁰ Hazardous Waste Management and Disposal Control Proclamation No. 1090/2018, 2nd and 3rd paragraphs of the preamble.

⁹¹ *Id.*, Art. 3(1).

⁹² *Id.*, Art. 3(2).

⁹³ Environmental Protection Control Proclamation No. 300/2002.

The Ethiopian law on environmental impact assessment requires a development project that might adversely affect the environment to pass through environmental impact assessment.⁹⁴ The law provides rules for the plan to retreat from vulnerable areas, and to control invasive species so as to protect the biodiversity.⁹⁵

Law supports economic instruments and incentives that promote climate change adaptation. Taxes, tradable permit schemes, and financial or administrative incentives for desirable behavior are economic instruments to promote adaptation.⁹⁶

Law provides legal frameworks for funding adaptation so as to help development projects that will play crucial roles in climate change.⁹⁷

In addition to the Environmental Policy, and other laws, which generally addresses to the issue of climate change, the Ethiopian Government has adopted Climate Change Adaptation Programme of Action (NAPA) in 2007.⁹⁸ The National Adaptation Programme of Action identifies priority areas for intervention so as to respond to climate change problems.⁹⁹ NAPA was intended to address the climate change adaptation issue in a specific manner. NAPA is a mechanism to identify the priority areas of Ethiopian Government for climate adaptation and to communicate it to the Conference of the Parties (COP) of the UNFCCC as well as other concerned bodies. Therefore, the basic purpose of the NAPA is to identify priority areas to be addressed to respond to the current and anticipated effects of climate change, which includes the extreme climate events. The Programme provides for flexible framework to guide the coordination and implementation of adaptation initiatives in Ethiopia. It also intended to build synergies with other relevant environmental and related projects and programs.¹⁰⁰

Further, the National Adaptation Plan (NAP) of the 2019 has the vision to “create climate change impact resilient development for Ethiopia and its people”.¹⁰¹ This makes clear that the plan is intended to ensure the continuity of development of the country. The Plan is applicable to the agriculture, forestry, water, energy, transport, urban and industry, among others.¹⁰²

Guiding Principles

The National Adaptation Plan has adopted six guiding principles that will apply to the implementation of the Plan. These principles are:¹⁰³

- 1) Participation- the implementation of the plan requires the participation of stakeholders, which includes the federal Ministerial offices, Regional Bureaus, NGOs, private sectors, and donors.
- 2) Coherent interventions- this principle requires actions to be carried out in a coherent and concerted manner to achieve the results.
- 3) Stake holder empowerment- stakeholders are to be empowered according to this principle.
- 4) Gender sensitivity- the Plan requires the participation of both women and men. It also gives due attention for the participation of women because women are vulnerable to climate change.
- 5) Principle of partnership- permanent dialogue with the representatives of various groups of stakeholders is needed.
- 6) Equitable implementation- this principle requires the equitable implementation of the social and environmental levels to ensure the coherence, continuity and sustainability of the intervention.

Agriculture and Forestry

In this sector, there are two ways of responding to climate change problems: Autonomous adaptation and government intervention. In the case of autonomous adaptation, the farmers adapt different ways of doing things particularly agricultural activities that include shifting from cropping one type of crop to varieties of crops, early planting and irrigation and soil conservation.¹⁰⁴

⁹⁴ Environmental Impact Assessment Proclamation No. 299/2002, *Federal Negarit Gazeta*, 9th Year, No. 11, Addis Ababa- 3rd December, 2002, 2nd paragraph of the preamble, Article 3(1) and Art. 5.

⁹⁵ Jan, *supra note* 85, at 285..

⁹⁶ *Ibid.*

⁹⁷ *Id.*, at 286.

⁹⁸ See Federal Democratic Republic of Ethiopia, Ministry of Water Resources, National Meteorological Agency, Climate Change National Adaptation Programme of Action (NAPA) of Ethiopia, (June 2007, Addis Ababa, Ethiopia).

⁹⁹ *Id.*, at 38-45, and 45 for the list.

¹⁰⁰ *Id.*, at 17-18.

¹⁰¹ Federal Democratic Republic of Ethiopia, Ethiopia’s Climate Resilient Green Economy *National Adaptation Plan* (May 2019), at 22.

¹⁰² *Ibid.* Unless adaptation is undertaken, the production in Ethiopia is estimated to decrease. See, The Federal Democratic Republic of Ethiopia, Ministry of Environment, Forest and Climate Change, *Proposal for REDD+ Investment in Ethiopia* (2017-2020, Addis Ababa), at 10.

¹⁰³ Federal Democratic Republic of Ethiopia, *National Adaptation Plan*, *supra note* 100, at 24.

¹⁰⁴ Federal Democratic Republic of Ethiopia, Climate resilience Strategy *Agriculture and Forestry*, (2015), at 41.

Where the farmers could not solve the climate change impacts by doing their activities as business usual, thus, the government will intervene and do whatever is necessary to respond to the climate change impacts. Thus, it becomes necessary to address these barriers using the law and plans to ensure the successful resilience.¹⁰⁵ The Ethiopian Government has filtered 41 options from 350 options, using different criteria. Feasibility, contribution to the economic growth, contribution to equity and distributional issues and the extent of they address the weather and future impacts of climate change are the criteria to identify the options. Some of the 38 were covered by the Ministry of Agriculture national program.¹⁰⁶

REDD is a proposed policy for climate change after Kyoto 2012, and is an abbreviation for “reducing emissions from deforestation and forest degradation”. REDD+ is “the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries”.¹⁰⁷ In Ethiopia, there is a great deforestation activity for different reasons, since the society bases its life on the forest for building houses, to get energy and so on, this makes deforestation the contributor of greenhouse gases in the Country. Ethiopia committed itself to invest on the afforestation and reforestation to curb this problem.¹⁰⁸ REDD+ is considered by the Ethiopian Government as important instrument to be included in its development Programme to address the GHG emission by reducing by half of its emission. The REDD+ Programme of Ethiopia is aimed at addressing the drivers of degradation and deforestation in the country as indicated in the REDD+ Strategy.¹⁰⁹ The Strategy, *inter alia*, addresses the legal issues related to forest management and REDD+ financial management mechanisms as well as benefit sharing.¹¹⁰ In addition, the Strategy promotes the protection, conservation and restoration of forest ecosystem, among others.¹¹¹

The implementation of the REDD+ Strategy faces problems such as coordination that renders it not fruitful as intended.¹¹² This might be considered as one of the indication of the problem of the non-existent of comprehensive law that would make liable any person who fails to perform as ordered by the law.

Water and Energy

The main rationale of energy law is to regulate the efficiency and conservation of energy sector.¹¹³ The Ethiopian Energy Authority has been established having the power to regulate the sector.¹¹⁴ The law generally regulates energy for instance through licensing.¹¹⁵

The Ethiopian Government has been regulating the generation and use of energy using a law. Thus, the law provides the licensing of hydro and geothermal power generation, wind, solar, biomass, urban waste, thermal and biogas power generation.¹¹⁶ The law provides the responsibility of the licensee, among which, is to protect human life, the environment and natural resources.¹¹⁷

The Ethiopian Government has adopted a climate resilience strategy for water and energy in 2015..¹¹⁸The three objectives of climate change resilience Strategy for water and energy are:¹¹⁹

- 1) To identify the challenge in water and energy related to climate change;
- 2) To identify the response to those challenges so as to water and energy sector climate resilient.
- 3) To map the implementation by identifying the necessary finance, among others.

Thus, the strategy focuses on the diverse energy mix and energy efficiency. With regard to water, the strategy emphasizes on the irrigated agriculture. It aspires to accelerate irrigation plans, and strengthen rain fed agriculture, and balance water demands.¹²⁰

¹⁰⁵ *Ibid.*

¹⁰⁶ *Id.*, at 40.

¹⁰⁷ REDD and RED+, *Fact Sheet*, at 1.

¹⁰⁸ FDRE Government, Ministry of Environment, Climate and Forest, *supra note 101*, at 13.

¹⁰⁹ *Id.*, 13-14. See Federal Democratic Republic of Ethiopia, Ministry of Environment, Forest and Climate Change, *National REDD+ Strategy*, (February 2018), at 20.

¹¹⁰ *National REDD+ Strategy*, of Ethiopia, *id.*

¹¹¹ *Id.*, at 20-21.

¹¹² See Mulatu Bekele et al, *REDD+ MRV implementation in Ethiopia*, Review of the context, framework and progress, (Occasional paper 192, Centre for International Forestry Research, 2018), at 31.

¹¹³ Energy Proclamation No. 810/2013, *Federal Negarit Gazete*, 20th Year, No. 12, Addis Ababa, 27th January 2014, 2nd paragraph of the preamble.

¹¹⁴ *Id.*, Arts. 3 and 4.

¹¹⁵ See *Id.*, Arts 6 and the following.

¹¹⁶ Council of Ministries Energy Regulation No. 447/2019, *Federal Negarit Gazette*, 25th Year No. 21, Addis Ababa 28th January 2019, Art. 12.

¹¹⁷ *Id.*, Art. 22(7).

¹¹⁸ Federal Democratic republic of Ethiopia, *supra note 12*, at 1.

¹¹⁹ *Id.*, at 5-6.

¹²⁰ *Id.*, at 35.

Transport Sector Strategy

Civil Aviation Authority has been established by Proc. No. 957/2016 to regulate the aviation sector. The objective of Civil Aviation is to ensure efficient and economical service.¹²¹ This would protect climate change since one of the regulations of the law is to ensure efficiency.

The road transport law has the objective, *inter alia*, to ensure clean environment and to ensure road transport be free from environmental pollution.¹²²

The Ethiopia's Climate Resilience transport Sector Strategy¹²³ provides that the vision of this strategy is to "ensure that Ethiopia's national development, poverty reduction and climate resilience goals are promoted by transport sector".¹²⁴

To achieve the vision, the national, regional and local plans should be implemented in an integrated manner.¹²⁵ The key principles of the transport vision are integrated, sustainable, safe, responsive, and affordable which are included in the CRGE and GTP.¹²⁶

Water sector

Despite the fact that Ethiopia is endowed with water resource, the distribution is uneven both in time and space.¹²⁷ The Ten Years Plan entitled: Ethiopia 2030: The pathway to Prosperity Ten Years Perspective Development Plan (2021-2030)" has been adopted and it includes the problem of water scarcity and drought on food security would be the case for conflict. The Plan provides that sustainable adaptation and resilience interventions are critical. Thus, improving resilience of water sources and improving access to potable water are the two strategic adaptations to water.¹²⁸

In Biodiversity

Ethiopia has adopted a strategy to prevent the harmful effect of climate change on biodiversity. The strategy is included in the Climate Resilient and Green Economy (CRGE), which includes sustainable land management of the country. Thus, sustainable land management project has been initiated and being implemented to build the natural resource of Ethiopia. The project has been successful in rehabilitating the degraded regions, which were previously uneconomical and unproductive.¹²⁹

Ethiopian Biodiversity Institute, Regional Biodiversity Units, and the Biodiversity Centre and the Ministry of Environment and Forest (now the Environmental Protection Authority) are institutes that are given the responsibility to conserve the biodiversity of Ethiopia.¹³⁰

The basic objective of the Biodiversity Institute includes ensuring the appropriate conservation, management and sustainable utilization of the biodiversity resource of the country.¹³¹ The Institute has the power to initiate policies and laws that will ensure the conservation and sustainable utilization of the biodiversity and implement same.¹³² It also has the obligation to implement international conventions and agreements to which Ethiopia is a party.¹³³

Ethiopia has been implementing the Biodiversity Planning 2011-2020, and encouraging results have been achieved.¹³⁴

The Ethiopian Environment, Forest and Climate Change Commission (EFCCC), after the development of NAP, has developed a strategy for mobilizing resources to implement the adaptation actions. The resource mobilization strategy summarizes the different options for financing the NAP implementation and will provide recommendations for combining different sources of funding. The strategy also serves broader resource

¹²¹ Civil Aviation Proclamation No 616/2008, *Federal Negarit Gazette*, 15th Year No. 23, Addis Ababa February 2009, Art. 9(1)

¹²² Road Transport Proclamation No. 1274/2022, *Federal Negarit Gazette*, 25th Year No. 21, Addis Ababa 28th Year No. 44, July 22, Art. 4(3).

¹²³ Ministry of Transport of Ethiopia, Addis Ababa, Ethiopia

¹²⁴ *Id.*, at 1.

¹²⁵ *Id.*, at 2.

¹²⁶ *Id.*, at 92.

¹²⁷ Federal Democratic Republic of Ethiopia, *supra note 12*, at 263.

¹²⁸ *Id.*, at 264.

¹²⁹ *Id.*, at 283.

¹³⁰ *Id.*, at 283. See Definition of Powers and Duties of the Executive Organs Proclamation No. 1263/2021, *Federal Negarit Gazette*, 28th Year, No. 4, Addis Ababa, 28th January, 2022, Art. 106 (37).

¹³¹ Institute of Biodiversity Conservation and Research Establishment Proclamation No. 120/1998, *Federal Negarit Gazette*, 4th Year, No. 49, Addis Ababa, 25th June, 1998, Art. 5.

¹³² *Id.*, Art. 6(1).

¹³³ *Id.*, Art. 6(7).

¹³⁴ See Federal Democratic Republic of Ethiopia, Ethiopia's Fifth National Report to the Convention on Biological Diversity, Ethiopian Biodiversity Institute, (May 2014, Addis Ababa, Ethiopia).

mobilization efforts led by the Climate Resilient Green Economy (CRGE) Facility in the Ministry of Finance (MoF).¹³⁵

Mitigation

The Paris Agreement requires party states to prepare, communicate and maintain successive nationally determined contributions to mitigate climate change.¹³⁶

Ethiopia has submitted the Nationally –Determined Contribution to the UNFCCC in 2016. This enables the country to implement the Climate Resilient Green Economy (CRGE) Strategy which integrates the green growth planning into the Ethiopian development and economic planning strategies.¹³⁷

Conclusion and Recommendations

Climate change is a complex and difficult problem common to all over the world. It is greenhouse gases such as carbon dioxide that give rise to climate change. Law plays essential roles to respond to climate change. The international legal regime on climate change includes the UNFCCC, the Kyoto Protocol and the Paris Agreement with the basic purpose to regulate climate change. Ethiopia, being a party to those laws, is required to implement them through its national laws. However, Ethiopian Government enacts no comprehensive climate change law. Different pieces of laws regulate the mitigation and adaptation mechanisms in Ethiopia.

What is more, the instruments that are aimed at responding to climate problems are strategies and plans. Ethiopia is a country where strategies and plans do not have binding legal effect, and therefore the legal mechanism in general is not sufficient to respond the problem of climate change.

Furthermore, the research identified problems of implementation of the respective laws and strategies as well as plans.

Considering the legal and practical gaps in the area, the researcher recommends:

- The Ethiopian Government shall enact comprehensive climate law at the federal level, and
- The regional States, including the Cities, shall implement the same;
- The institutions are dispersed with the sectors. It is better, at least to bring together the climate change regulation in the hands of one or two institutions so as to strengthens the coordination of the implementation of climate change law.

¹³⁵ See The FDRE, Resource Mobilization Strategy for NAP- ETH, 2020.

¹³⁶ Paris Agreement, , Art. 4(2).

¹³⁷ World Bank Group, *supra note 11*, at 3.