

# 6

## Climate Governance and Federalism in Ethiopia

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### 6.1 Introduction

Ethiopia is the only African country that has remained independent for centuries, with its own written script, number system, and calendar (Fiseha and Habib 2010). It is a multi-cultural and multi-religious country with a rural majority that relies on traditional natural resource management. Since Eritrea's independence in the early 1990s, Ethiopia has been a landlocked country with an area of 1.1 million square kilometres and the second-most populous country in Africa, after Nigeria (CSA 2014). Agriculture is the mainstay of the economy, accounting for more than half of the GDP, employing more than 85 per cent of the workforce, and generating over 90 per cent of the country's foreign exchange (Alemu, Oosthuizen, and Van Schalkwyk 2002). Ethiopia's agriculture is dominated by smallholder farmers practising rain-fed mixed crop production, and is typically characterized by low productivity, implying its high vulnerability to various anthropogenic and natural hazards (Devereux 2006; Gebre-Selassie and Bekele 2010; Ketema and Dubale 2020; Worku 2016). Environmental degradation and climate variability and change are two of the major challenges undermining the agriculture sector in particular, and Ethiopia's effort to become a middle income country by 2025, and to make considerable progress in achieving the sustainable development goals by 2030 in general.

Ethiopia has developed and adopted several strategies in response to climate change. The Climate Resilient Green Economy (CRGE) Strategy, which promotes a paradigm shift to low-carbon growth is one of the strategies designed and implemented over the past decade (FDRE 2011). The CRGE Strategy is prepared by drawing on the experiences and achievements of various precursor strategies such as the Growth and Transformation Plan (GTP I) and International Agreements and Protocols to which Ethiopia is a party and signatory. The CRGE is integrated into different development plans such as the GTP-II that has been implemented by sector ministries at federal level and in regional states.

This chapter provides an overview of how the federal structure has been affecting efforts to mitigate and adapt to climate change in Ethiopia. Ethiopia is a federal country comprising eleven regional states and two city administrations. The decentralized governance structure determines the relationship between the federal Government and its component units. The structure and division of powers provides for the federal Government and regional states to formulate and implement policies, plans, and strategies in their respective jurisdictions. The federal, regional, and sub-regional level achievements in the implementation of strategies such as the CRGE strategy, the central goal of which is to promote a green and resilient economy, are influenced by the decentralized administrative structure. The differences in achievements are attributable to constraints on the implementation of ongoing and future climate change mitigation and adaptation interventions, such as inadequate capacity of implementing bodies; scarcity of financial resources; dearth and inaccessibility of information where and when available; variations of priorities and type of interventions; geographical location; weak knowledge management systems, monitoring and evaluation systems.

## **6.2 Trends, Patterns, and Impacts of Climate Change in Ethiopia: An Overview**

### ***6.2.1 Climate Change Trends and Patterns***

Despite its growing vulnerability, Ethiopia's contribution to global warming is insignificant – its per capita GHG emissions remain among the lowest both in Africa and in the world (UNFCCC 2005). The assessment made in 2010 indicated that the country emitted 150 Mt CO<sub>2</sub> equivalents (less than 0.3 per cent of global emission). The report also expounded that 50 per cent of the emissions are from agriculture (crop and livestock) and 37 per cent from forestry, followed by industry, power, transport, and buildings contributing on average 3 per cent each. The larger share of emission from agriculture is attributed to the presence of more than 50 million cattle and nearly 100 million different livestock species. These emit substantial amounts of methane and other oxides of nitrogen. Likewise, there is an increasing use of inorganic fertilizers to grow crops, and an expansion of agricultural land which reduces forest cover and grasslands. As described in the CRGE strategy, with the business-as-usual (BAU) scenario, emission will increase to 400 Mt CO<sub>2</sub> equivalent by 2030, and with increasing per capita emission from 1.8 tons to 3 tons. Industrial emissions are projected to increase by more than twelve-fold, and emissions from other sectors will also increase because of continued infrastructure development.

A long-term trend analysis of temperature data shows about 0.2°C rise every decade, where the rise in the minimum temperature is approximately 0.4°C per

decade. At the national level, temperature has increased by approximately 1°C since the 1960s. According to the World Bank (2021), the average number of 'hot nights' per annum (the hottest 10 per cent of nights) increased by 37.5 per cent between 1960 and 2003. Similarly, the average number of 'hot days' per year increased by 20 per cent with decreasing number of cold days. Increasing temperatures have been resulting in increased evapo-transpiration and reduced soil moisture and higher rates of warming including the central and highland areas of the country. This report predicts that the mean annual temperature will increase between 0.9 and 1.1°C by 2030, 1.7 and 2.1°C by 2050, and 2.7 and 3.4°C by 2080. In contrast to temperature, the average precipitation has remained reasonably constant. The IPCC mid-range emission scenario shows that compared to the 1961–90 baseline, the mean rainfall variability between years, seasons, and regions ranges between 25 and 50 per cent.

### ***6.2.2 Impact of Climate Change***

Ethiopia is one of the countries most vulnerable to climate change. Projections show increasing risk of drought, heavy rains, and flood in various agroecological zones. Extreme climate effects might set back development efforts and accomplishments unless appropriate adaptation measures are put in place. A report by the World Bank discerns that the occurrence, severity, and coverage of droughts has ominously increased over the past few decades, causing significant damage to life and livelihoods (World Bank 2006). In Ethiopia, almost all sectors including agriculture, infrastructure, energy, transport, and health are affected by drought (Adem and Bewket 2011; Mesfin 1984). Recurrent drought has been dramatically decreasing crop production, causing the death of livestock and increases food insecurity and malnutrition, forcing people to be displaced and aggravating environmental degradation making food security a major challenge (NMA 2006).

The Irish Red Cross (2007) report shows that incidences of flood increase eight-fold in Africa where the impact of climate variability and change is high. For instance, the disastrous flash flood in Eastern Ethiopia in 2006 caused casualties and displaced several thousands of people (Irish Red Cross 2007). The frequency of flood and the areas affected have significantly increased over the past few decades (NASA Earth Observatory 2008). Similarly, the Centre for Research on Epidemiology of Diseases (CRED) reports that Ethiopia's vulnerability to climate change has increased. Though droughts and floods affect people from all walks of life, they are especially detrimental to the lives and livelihoods of smallholder farmers and pastoralists (Oxfam 2009). In the presence of multi-faceted challenges

including poor socio-economic conditions, fragile ecosystems, and low adaptive capacity, Ethiopia cannot address the challenges on its own.

Because of differences in environmental, institutional, and socio-economic characteristics of regions, sub-regions and communities, the impact of climate change varies from place to place. Pastoral and agropastoral communities have been suffering the most. The growing vulnerability of these communities could also be due to the dryland agroecology they live in. An estimated 75 per cent of Ethiopia's landmass is classified as dryland with high moisture stress. Although drylands exist in all parts of the federal regions, they are pervasive in Afar, Somali, Gambela, Benishangul, Oromia, and Southern Nations and Nationalities. In addition, some of the communities, particularly those designated as emerging regions in the federal system, have comparatively high vulnerability because of weak institutional capacity. Other regions have also experienced severe land degradation because of traditional farming techniques, severe erosion, high soil acidity, and other factors that increase their vulnerability.

### **6.3 Policy and Institutional Frameworks and Responses to Climate Change in Ethiopia**

#### ***6.3.1 Policy and Institutional Framework***

The Ethiopian Constitution provides articles dealing with environmental management and sustainable development. Article 43, for instance, states that 'The right of Ethiopia to sustainable development shall be secured and ensured by all international agreements and ties concluded, developed or preserved by the State.' Similarly, Article 44(1) says 'all persons have the right to live in a clean and healthy environment'.

In addition to the provisions of the Constitution, the government issued policies, strategies, programs, and legislations that aimed at improving forest management, biodiversity conservation, and reversing the loss of renewable natural resources that otherwise intensify vulnerability to climate change and other hazards. The Environmental Policy (1997), Environmental Protection Organs Establishment Proclamation (295/2002), Environmental Impact Assessment Proclamation (299/2002), Environmental Pollution Control Proclamation(300/2002), Forest Development, Conservation and Utilization Policy and Strategy (2007), Climate Resilient Green Economy Strategy (2011), National Forest Sector Development Programme (NFSDP 2018), National REDD+ Strategy (2018), updated Nationally Determined Contribution (2021), National Adaptation Plan (NAP-ETH 2019), and Forest Development, Conservation and Utilization Proclamation 1065/2018 etc show the efforts the government of Ethiopia has made to protect the environment,

sustainably manage renewable natural resources, and reduce vulnerability to climate change and variability.

The African Development Bank states that Ethiopia's government policies, strategies, and institutional frameworks for the management of natural resources and environment are adequate and sound (African Development Bank 2015). Despite differences in implementation capacity, climate-related issues are integrated into sectoral programmes that are implemented at federal, regional, and sub-regional levels. In addition, successive growth and transformational development plans were developed by considering the links between poverty and environment. Recent trends show that the government of Ethiopia remains committed to integrate environmental protection into development planning and implementation processes.

In addition to issuing policies and strategies, the government of Ethiopia has also put in place institutions that are responsible for guiding the implementation of these policies and strategies formulated to achieve environmental goals. In 2013, the government established the Environment, Forest, and Climate Change Ministry, which was restructured in 2018 to function as a Commission. Currently, it is split into two institutions (Environmental Protection Authority and Forest Development) with the former having regulatory responsibilities concerning the environment, and the latter with a mandate to lead the forestry sector development including restoration of degraded landscapes, increase forest cover, reduce deforestation, and thereby contribute to the mitigation of and adaptation to climate change. In fact, not only the environment and forest institutions, but also all sectoral ministries are obliged to include climate change mitigation and adaptation plans in their respective work plan as elaborated in the CRGE strategy. Regional bureaus are also expected to do the same. Ethiopia has established the CRGE Facility to coordinate the mobilization of financial resources needed to implement priority climate and environmental interventions. The facility has enabled Ethiopia to access funds from bilateral and multi-lateral development partners (GCF 2016). For instance, Ethiopia is one of the few countries that secured funds for its large-scale REDD+ (Reducing Emissions from Deforestation & forest Degradation) Investment Programme. REDD+ is a global policy framework under the UNFCCC for climate change mitigation in the forest sector.

### ***6.3.2 Responses to Climate Change***

As a country vulnerable to climate change, Ethiopia has been trying its best to respond to the problem. The first and earliest response was the decision made to sign the UNFCCC during the 1992 United Nations Conference on Environment and Development held in Rio de Janeiro, Brazil. Ethiopia ratified the Convention

on 31 May 1994 by Proclamation No. 97/1994 and issued Proclamation No. 97/1994. In addition, the Kyoto Protocol was ratified on 21 February 2005 and became law through Proclamation No. 439/2005. Both international agreements are considered as an integral part of the law of the country as provided in Article 9 of the Constitution. Furthermore, Ethiopia has signed several environmental agreements including the United Nations Conventions on Biodiversity (UNCBD) and United Nations Conventions to Combate Desertification and Mitigate the Effects of Drought (UNCCD), which are important to advance climate change mitigation and adaptation actions. Ethiopia's commitment to implement the international agreements got traction by conducting the national greenhouse gas emissions and sinks inventory in 1994. This established the basis for the initial national communication submitted to the Secretariat of the UNFCCC in 2001 (FDRE 2001).

Ethiopia has remained a prominent player in international climate change negotiation forums. For instance, based on the decision made by the parties to UNFCCC, it has identified its most urgent and immediate adaptation needs, which led to the preparation of the National Adaptation Plan of Action (NAPA) in 2007 (FDRE 2007), which identified dozens (58 in number) of adaptation options. The NAPA was revised in 2019 to build on ongoing efforts to address the impact of climate change. The goal of NAP–Ethiopia (NAP–ETH) is to reduce vulnerability to the impacts of climate change by building adaptive capacity and resilience. Supported by several institutions, governance structures, and finance, NAP–ETH aims to strengthen holistic integration of climate change adaptation in Ethiopia's long-term development pathway and enhance systems for disaster risk reduction and management in different sectors. In addition to the efforts made to adapt to the impacts of climate change, Ethiopia has also submitted its nationally appropriate mitigation action (NAMAs) to UNFCCC, which focused on appropriate development and management of hydropower, wind power, nuclear, geothermal, electric rail, and urban waste.

Ethiopia's CRGE Strategy issued in 2011, is one of the most important policies to reduce GHG emission by adopting green growth initiatives (FDRE 2011). In contrast to the adaptation plan, the CRGE Strategy focuses on building a climate resilient and low carbon economy. Ethiopia has also determined to reduce its carbon footprint by achieving 68.8 per cent GHG reduction by 2030. As mentioned earlier, the 2010 emissions assessment showed 150 megatons of carbon dioxide equivalent (Mt CO<sub>2</sub>e) which will be reduced to 145 MtCO<sub>2</sub>e in 2030. The updated NDC, in addition to the familiar mitigation interventions, has identified forty adaptation options, which eventually will substantially contribute to social-ecological resilience.

Sustainable forest management is one of the pathways adopted to improve the valuation and provision of ecosystem goods and services. In this regard, Ethiopia

has committed to restore 22 million ha of degraded land through afforestation and assisted natural regeneration. The Green Legacy Initiative (GLI) launched by Ethiopia's prime minister aims at planting 20 billion seedlings over five years. This is a manifestation of the government's commitment and determination to increase the country's forest cover by reversing deforestation and setting the stage for building a green economy. In this regard, the ongoing landscape restoration efforts are supported by robust forest management policies and strategies.

The various climate change mitigation and adaptation strategies and programmes mentioned above have been led by the federal Government and implemented by regional states. The programmes and actions cascaded and adapted to the context of each region are mandatorily mainstreamed in regional plans. In addition, projects implemented in regions (for example reforestation undertaken in areas with reduced forest cover because of deforestation and forest degradation) are required to be aligned to regional plans based on the suitability of the area where projects are implemented.

## **6.4 Climate Change Governance and Federalism in Ethiopia**

### ***6.4.1 Ethno-federalism in Ethiopia***

Ethiopia's federal system has been in place since 1991, when the Ethiopian People's Revolutionary Democratic Front (EPRDF) overthrew the Socialist regime. The EPRDF established its Constitution, which came into effect in 1994. The preamble states that Ethiopia's federal system is based primarily on ethnicity, with each 'nation, nationality, and people' having the right to have their own region and decentralized administration. According to this provision, Ethiopia's federal system now has eleven regions (up from nine in 1995) and two city administrations. There is a strong tendency to increase the number of regions because the Constitution enshrines the right of the nationalities within a regional state to establish their own state if the proper procedures are followed (Markakis 2006). For instance, the regional states of Sidama and Southwest Ethiopia have been recently formed following a referendum, which ratified the shrinking of the Southern Nations, Nationalities, and People regional state. As in most federal countries, the constituent units in Ethiopia vary in the size of their area and population. The Constitution provides for the management of the variation by recognizing that 'the Member States of the federal Democratic Republic of Ethiopia shall have equal rights and powers' (Institution of the Ombudsman Establishment Proclamation, Year 6 No. 41, Proclamation No. 211/2000).

The Constitution grants ethnically defined regional states the right to self-determination, which devolves political, administrative, and economic power, and

unlike in other federal countries, guarantees the right to secede from the federal country. Ethiopia, as an old nation, has gone through political, economic, and social upheavals, territorial expansion and contraction, division and merger of political administration, consolidation, and separation of administrative boundaries. However, the current ethnic-based federalism is the first of its kind in the country's political history.

Chabal and Daloz (1999) and Ottaway (1994) remind us that ethnic federalism is still controversial, with some academics viewing it as a recipe for state disintegration, while others see it as a governance system that allows for different ways of thinking about ethnicity while avoiding conflicts and marginalization, particularly in African politics. Similarly, Ethiopia's ethnic federalism continues to be a hot topic of debate among elites and ordinary citizens alike, attracting both criticism and support. One of the most persistent criticisms of the Constitution concerns its provision of rights to regions to secede from the federation, as well as the fact that it is more primordial in its nature. This is unusual in other federal countries where federalism has been practised as 'union and non-centralization at the same time' (Aalen 2002). Elazar (1987) also argued that federalism is considered to advocate the values of 'unity in diversity', giving the constituent units the right to self-government within the framework of unity, not the right to secede. In contrast, Ethiopia's federal arrangement has been attracting support as it promotes the value of diversity, self-rule, recognition, and wider space for accommodating diverse political views. In fact, the critics also appreciate these values, including the right to self-rule and devolution of power, arguing these values and provisions can be accommodated without stretching the rights of nationalities up to secession.

#### ***6.4.2 Division of Power***

The federal government is given enumerated and limited powers and responsibilities under the Constitution. It has the mandate to develop and implement national policies, plans, and strategies pertaining to overall economic and social development. Similarly, the Constitution empowers the federal government to develop and implement national policies and strategies in the financial and monetary sectors, as well as in the utilization and conservation of natural resources. Furthermore, the federal government has the authority to establish national standards for the protection of cultural and historical sites, as well as for public health, education, science, and technology. In addition to the more traditional roles of the federal government in the fields of defence, foreign affairs, inter-state and international trade, these powers and obligations are particularly important.



The Constitution assigns exclusive state and concurrent roles to the regions, as well as residual matters. Consequently, by virtue of its mandate to deal with residual matters, powers and responsibilities of the regional governments are likely to increase. Contrary to practice in other federal countries such as India and Nigeria, the constituent units are permitted to have their own constitutions, even though they are subject to the supremacy of the federal constitution. Initially, the federal and regional constitutions were similar. Some years later, however, they have been revised in a manner that represents significant variations (Habib 2010).

### **6.5 Implication of Ethiopia's Ethnic-Based Federalism on Climate Change Governance**

Despite its seemingly linguistic orientation, the ethnic federalism exercised in Ethiopia is based on primordial identity (Abbink 2011). This has aggravated minor differences among various ethnic groups, resulting in conflict (Taye 2017) which caused human casualties and destruction of property in different parts of the country. Though the factors are diverse, one main cause is the establishment of identity (language-based) federalism. This federal system is not limited to political governance, but extends to other sectors such as natural resources, the environment, and climate change management.

As explained above, the Constitution provides for the central and regional governments to have their own legislative, judicial, and executive power and rights related to important political, economic, and social issues (Markakis 2007). However, Fiseha (2018) argues there are no clear distinctions in legislative, judicial, and executive power and rights of the central and regional governments. Such overlaps affect the implementation of climate change mitigation and adaptation interventions at various levels of the federal and regional administration (Fiseha 2018).

Another feature of Ethiopia's federal system related to climate governance is the country's proclivity to create new regions. Following the coming into full force and effect of the Constitution in 1995, two additional regions have been established following a referendum. In view of the aspirations of nationalities to form their own region, one can only imagine the challenges this will pose to the new, old, and central governments in terms of sharing existing scarce resources and guaranteeing rights concerning the utilization and management the same resources. This is because referendums result in reorganizing the use of infrastructure use and determining new modalities for accessing natural resources such as land, forest, water, and human and technological capital, which were previously used as shared resources. For example, the carbon-rich forests that were once administered by the SNNP region are now administered by the new

Southwest Ethiopia region. The transfer of such critical ecosystems to the new regional state will undoubtedly cause temporary loss of momentum in advancing climate change mitigation and adaptation actions and delay the achievement of targets. It also forces the old region to forego significant amounts of funds it hitherto received from national and international treasuries, which used to contribute to the region's effort to achieve sustainable development goals. The old region also loses human capital, land, and infrastructure, all of which would have helped to improve the region's adaptive capacity.

Notwithstanding the above, the same argument can be made of the new region. Even though the referendum may address politically and economically motivated aspirational issues, it also deprives the new region access to existing infrastructure, institutions, technologies, and other assets that have been jointly built over the years. For example, if Hawassa city, which has been developed as a regional centre for the SNNP region, is claimed as the property by Sidama region, it will take the SNNP region and the new regions a long time and a large investment to have such a regional capital. The problem is that the loss and the need for shifting funds to develop new infrastructure will undermine the new region's ability to adapt to climate change, at least until it builds the necessary capacities and capabilities. Moreover, the transition may increase the new region's carbon footprint because the change necessitates more investment in institutions, transportation, and other infrastructure – all of which may increase the rate of deforestation that contributes to GHG emission in the new region. Furthermore, there is no guarantee that the central government will maintain natural forest blocks in the new regions. This is because the new region may establish development priorities that result in land use change, which is expected at the early stages of a region's establishment.

Another important aspect of Ethiopia's federalism in terms of climate change governance is the huge disparity between regions. For example, Afar and Somali regions are more vulnerable to recurring and severe droughts and floods than others because of their geographical location. These two component units of the federal administration possess extensive drylands, which are characterized, among other factors, by moisture stress. In contrast to other regions that have highlands, midlands, and lowlands, which allow for better seasonal rainfall amount and distribution, communities in Afar and Somali regions do not have the conducive climatic endowment. These communities, majorly of pastoral livelihood, do not have the ease move to areas in other regions with favourable climate to avoid seasonal risks and hazards caused by climate change. Ethnic federalism created visible differences between regions, in terms of having access to fertile arable land, water, forest, and other natural capital, which is a source of disproportionate vulnerability to climate change. There is also a huge disparity in human capital between regions. For example, Harari region, with an estimated population of less

than 300,000 people, competes with Oromia region, having an estimated population of over 30 million. This has implications in terms of human capital, tax collection, access to resources from the central government, and affects, among other things, responsiveness to climate change. There are also significant differences in institutional capacities and capabilities across regions, which either facilitate or hinder mitigation and adaptation actions aimed addressing the impact of climate change. As a result, one could argue that ethnic federalism has contributed to existing regional differences in terms of preparedness to respond to climate change. Indeed, the Constitution states that members of the federal Government 'shall have equal rights and powers' (Institution of the Ombudsman Establishment Proclamation, Year 6 No. 41, Proclamation No. 211/2000). Such narratives, motivated and driven by identity-based ideology and policy which have been translated to action through the institutionalization of a federal administrative structure, have been increasing tensions between ethnic groups, and increasing risks to vulnerable communities which lack capacity to minimize harm to themselves and their fragile environment. Experiences over the last three decades show an increasing number of communities trapped in vicious circles of vulnerability and uncertainty because of unfounded narrative that spreads hate and division among communities rather than promoting peaceful coexistence and unity. This has also added to the central government's burden, as it must allocate a large amount of budget every year for the provision of safety net/social security services to support these vulnerable communities. If voluntary mobility were easier, the government would have a better chance of assisting vulnerable communities to become self-sufficient, allowing the safety net programme budget to be used for other development interventions.

Another important challenge of the federal system in Ethiopia related to climate governance is associated with the division of power and rights among central and regional governments. The Constitution confers enumerated and limited powers and responsibilities on the central government. Although the central government has the power to formulate national policies, plans, and strategies concerning economic and social development, the right to own and administer land and natural resources that is crucial for climate change adaptation and mitigation is under the jurisdiction of regional governments. The regions have full right to administer land and natural resources in harmony with federal policy, strategic and legal frameworks. That means the federal Government does not have direct control over natural resources (except enacting laws for the utilization and conservation of land and other natural resources) and cannot have the direct right to redistribute benefits derived from natural resources to all citizens to enhance adaptive capacity and ensure sustainable development. The federal Government cannot put a particular critical ecosystem that has national significance under full protection or

relocate certain vulnerable groups to a suitable watershed without the agreement of regions. Some regions have listed the ethnic groups in their Constitution as the owners of the region, alienating other groups that have lived in the regions for generations. The state of exclusion and/or under-representation in decision-making processes has implications for climate change mitigation and adaptation and is an important governance issue in terms of inclusiveness and empowerment concerning natural resources management and benefit sharing. It needs to be noted that regional states as part of their power and functions are responsible for administering land and other natural resources in accordance with federal laws. It also needs to be taken into consideration that the Constitution allows the regional states to deal with matters not given expressly to the federal Government alone, or concurrently to the federal Government and the states. This has provided states with unintended expanded powers. In other words, the current ethnic federal system doesn't bind itself to political governance only but often extends to making decisions over the use of natural resources, access to facilities, infrastructure, and markets. Minorities with less access to these facilities and benefits are always the ones who disproportionately carry the risks of climate change.

There are also arguments and critics of Ethiopia's ethnic federal system in relation to the country's rapidly growing population, which has a direct relationship with climate governance. The allocation of budget and other resources from the federal government to states, and the distribution of seats in the federal parliament (House of People's Representatives), is based on the population size of each region. This has fuelled competition among regions to increase the size of their population and has resulted in the country's rapid population growth. There aren't many countries in the world where the population has more than doubled in less than thirty years. Ethiopia's population, which was estimated to be less than 60 million people thirty years ago, is now estimated to be 120 million. Rapid population growth in regions has resulted in overuse of natural resources, which in turn is exacerbating social-ecological vulnerability both in the regions and at national scale.

One can argue that the ethnic-based regions are focusing on maintaining their advantages (for example in natural resources endowment) and their own development. This has resulted in the pursuit of fragmented national agenda and poorly coordinated planning concerning cross-cutting issues including responses to climate change. As mentioned earlier, climate change management requires cooperation and concerted action by all government institutions. In contrast, there is growing incoherence among regions and the federal government in terms of setting development priorities. For instance, the recent CRGE strategy progress assessment report revealed a slow implementation of the strategy in some regions, which has a significant impact on achieving the national targets. Another

example is the contrasting plan of some regional governments compared to the central government aimed at reducing the number of livestock, which account for the lion's share of GHG emissions. According to the assessment report, the number of livestock is increasing rather than decreasing, as stated in the CRGE Strategy. This is because livestock is a priority economic sector in some regions, primarily in pastoral regions such as Afar and Somalia. Since such and other similar practices do not consider the neighbouring regions, several challenges and problems occur in the regions that increase the vulnerability of different communities to climate change and weaken their climate resilience capacity. For example, the current environmental and social impacts (ESIA) report approval mechanism could describe the challenge. Regions in the federal system are also entitled to approve ESIA reports prepared for a wide range of projects that could have potential impact on people and the environment. Because of the weak capacity of the bureaucracy to manage such complex tasks and the limitations of the ethnic federal system, regions approved thousands of ESIA projects without considering the interregional impacts of the projects. This has caused grievances in communities living in the delivering and receiving ends of the ESIA decisions. For example, different floriculture industries established near Lake Ziway in the Great Rift Valley have faced recurrent damage by youth at different times.

Despite the job opportunities the industries have created for the local people, the pollution in Lake Ziway, which had been once used as a livelihood means through fishing activities, has caused loss of its fish population, leaving many people without income (Teklu et al. 2018). And the fish are no longer preferred by the public due to the belief that toxic chemicals have accumulated in the fish. This means, under the prevailing impact of climate change, the resilience of local people (their capacity to cope with shocks and disasters) is threatened. That leads to violence and distraction of companies, though other politically motivated reasons might have triggered the destructive actions. Similarly, pollution in the Awash River caused by untreated effluent from industries flowing from the central highland through the Great Rift Valley depressions have resulted in severe water quality deterioration, affecting the quality of vegetable production downstream (Tadese, Sonder, and Peden 2003). Not only that, this polluted water source also affects the pastoral communities downstream which are more vulnerable to climate change. The cause of such problems is not only the failure of industries to put in place environmental protection measures, but also how the ESIA and environmental management plans are approved and executed. Such problems are not only limited to the Rift Valley, but also observed in different regions confronted with similar issues.

One key root cause to these problems is the implementation of ethnic federalism, which promotes skewed development. All regions in Ethiopia are

under high competition to attract investment in their regions regardless of the projects' nature in terms of the sustainability indicators. Projects require different types of landscapes and climatic conditions to produce their products efficiently. However, what is observed among regions is that they accept every project proposal without thoroughly pre-screening for their suitability in terms of technical, social, and environmental standards. This hastens the unintended environmental and social crises in the respective regions and across the country. Consequently, there are growing trends to take advantage of the loosening project approval mechanisms by local and international investors to install old and second-hand machinery that has been abandoned in other countries. This has been affecting aquatic and soil systems, which have hampered the livelihood activities of communities. Had there been a coordinated approval mechanism among regions, these problems would not have been magnified to such an extent.

Under the present federal administrative arrangement, the Government is responsible for national parks and a few other resources that are found in different parts of the country and is expected to work in close collaboration with regions. However, the federal Government approves ESIA reports for large-scale investment projects implemented at the regional level sometimes without the understanding of the regional respective bureaus. This shows the conflicting application of mandates by the federal and regional governments, which in turn continue to cause undesirable problems at local level. For instance, the massive deforestation of natural forests for large-scale commercial agricultural investment in the Gambella Region (GRAIN 2019), carried out following the approved ESIA by the federal Government, has evicted thousands of farmers from their land, and failed to meet the target. These and other similar unwarranted interventions have affected thousands of people, exacerbating the vulnerability of communities to climate change. Moreover, the mining sector is also confronted with similar bottlenecks which result in multi-faceted environmental, economic, and social problems.

In the recent two decades, Ethiopia has set a green economy policy where the CRGE strategy is an integral component of this policy. As a result of this, Ethiopia has built a couple of small, medium, and large hydropower projects, which are climate-sensitive. However, due to the uncoordinated natural resource management among the regions, most watersheds are highly degraded and significant sediment intrusion into the dams has been reported in different journal articles and media outlets. One barrier to fixing this problem is the nature of federalism, which allows people to use their natural resources without any intervention. In other words, if the hydropower is located in one region, the watershed is stretched in other regions that require watershed management at the upper catchment, such as maintaining the existing vegetation in the basin, implementing soil and water

conservation activities, and other requirements. Despite the fact that this is the fundamental agreement in the scientific principles, what is observed on the ground is quite the opposite. Theoretically, one can raise the idea of coordination among regions to manage such kinds of problems. In practical terms, this has been unsuccessful and cannot be achieved without a constitutional amendment. To elaborate, how can one forbid regions from utilizing their resources when they are constitutionally entitled to do so? Is this issue merely approached with coordination as a solution among the regions? This situation needs to be rectified through a constitutional amendment, which provides for mandatory coordination between regions concerning the enhancement of ecosystem services that have implications for important infrastructure that could be affected by the action or inaction of regions either upstream and downstream.

Finally, climate change adaptation and mitigation necessitate massive private sector engagement. The private sector's involvement is critical for mobilizing finance, introducing innovation and technology, and building capacity, which are required to turn challenges into opportunities and thus improve social-ecological resilience. The private sector could play critical roles in creating green jobs, transferring risks to third parties, and thus contributing to the enhancement of the adaptive capacity of communities in regions. However, over the past decades, the progressive division of regions along ethnic lines has slowed and, in some cases, stopped, resulting in casual hit-and-run investments. As propensity to identity politics becomes stronger, manifestations of malpractices and double standards have emerged in decision-making processes. This in turn ensued corrupt practices caused havoc on the governance of actions aimed at reducing the impacts of climate change. Unless and until the above-mentioned issue is resolved, there is serious concern that the problem will become more complex, trigger conflicts, and erode trust among regions and between the federal government, all of which will weaken the state and invite external risks to the country. In general, climate change governance requires a coordinated effort. The key pillars of climate change governance include mitigating and adapting to the risks of climate change. This will ensure that the appropriate management of renewable natural resources and the environment, that is, water, soil, air, and living things will enhance the resilience capacity of communities. This calls for coordinated action among regions.

Despite the challenges and problems vis-à-vis ethnic federalism in Ethiopia's climate change governance, the federal arrangement has resulted in political and economic gains. The opportunities of the federal system to govern climate change issues in the Ethiopian context might be highlighted in the following perspectives. These are: (a) nationalities are recognized and represented in the parliament; (b) power is devolved to regional level, providing space for exercising self-rule

including adopting climate change-related policies and practices that match regional contexts; and (c) nations, nationalities, and peoples can promote and develop their culture, religion, social values, and their traditional knowledge system. These opportunities give regions the right to exercise self-rule including practising climate change adaptation and mitigation activities that fit to their contexts. The constitutional right conferred on the nationalities under the federal system to promote and develop their cultures, religion, and other social values including the opportunity to integrate their traditional knowledge system into conventional knowledge system that has profound importance to climate change adaptation and mitigation. Though the right of the regions to formulate their own development plan has caused unprecedented challenges, the federal system provided the regions with the opportunity to focus on their priorities and improve infrastructures and basic social services including access to education and health. At national level, the prospect of multiple political parties competing in a democratic process for parliamentary seats is expected to progressively deliver outcomes that will be important for sustainable development and the fair share of benefits derived from these outcomes, which is critical to ensure social-ecological resilience in Ethiopia.

## **6.6 Conclusion**

Despite its insignificant contribution to global warming, Ethiopia has been suffering due to impacts of climate change. Climate change, coupled with widespread landscape degradation, has had a detrimental impact on agriculture, the primary source of income for most of the population, as well as the rest of the sectors, putting severe strain on the country's hard-won achievements. Ethiopia's government has been attempting to address such issues. Ethiopia introduced its climate-resilient green economy strategy (CRGE strategy) in Durban, South Africa, in 2011. The CRGE was well received by the international community, and the country has been in the forefront in the fight against climate change since then. Ethiopia has also signed the Paris Agreement and submitted its most recent Nationally Determined Contribution (NDC) to the secretariat of the United Nations Framework Convention on Climate Change (UNFCCC). Ethiopia's NDC is ambitious and aims to cut emissions by 68.8 per cent by 2030. Institutions have been established to address climate change and environmental issues, and efforts have been made over the past decade to mainstream climate change governance at various levels of the federal and regional structure. Climate change adaptation and mitigation programmes and projects are also underway in various parts of the country.

Despite these developments, effective climate change governance continues to face challenges, undermining achievements and contributing to increased food



insecurity and disproportionate vulnerability in some regions. Even though there exist a strand of supplementary and complementary factors, the major problems are linked to the ethnic-based federal arrangement. The demarcation of regional boundaries based on identity has resulted in significant differences in human, institutional, and financial capacity across regions, resulting in a slow process of implementing climate change management activities. The large disparity in population size is linked to scarcity of critical human resources in some regions, which weakens institutions and results in poor law enforcement. Because of their geographical location, the identity-based governance structure has also created regions that are most vulnerable to the effects of climate change. It has also created regions and communities with less natural capital, such as fertile land, adequate water, and forest resources, all of which are critical for increasing social-ecological resilience. These differences play a significant role in the slow progress of some regions and communities in stepping away from the vicious circle of poverty and vulnerability to extreme weather events and environmental degradation.

Furthermore, ethnicity-laden, region-centric development competition among regions to meet their respective plans has resulted in insufficient coordination to manage climate change and environmental issues with cross-regional and national implications. The constitutional right granted to regions to use their natural resources, including critical ecosystems, provided the federal government with less leeway in minimizing the impact of developments in the upperstream region on the downstream regions. Attempts to enact laws and regulations dealing with such issues have so far been unsuccessful, because such initiatives are frequently viewed as a violation of the regional and federal constitutions. The fact that regions have their own development priorities has slowed the achievement of national targets related to building a green economy. For instance, the national plan to reduce the number of livestock is incompatible with the regional plan because the livestock sector is considered the main economic activity in some regions. The same is true for conserving carbon-rich forests or increasing the country's forest cover, as ethnic regions have access to land and the mandate to manage natural resources. Most painfully, cross-regional migration and resettlement programmes, which are critical climate change adaptation strategies, are no longer feasible under Ethiopia's federal arrangement. This is also partly because of the deterioration of trust between nationalities and regions and the central government as a by-product of the narrative of self-rule over the last three decades. There have been numerous instances where the dominant narrative of diversity over unity has resulted in the eviction of dozens of members of other nationalities, making them more vulnerable to climate change.

Despite the challenges and problems, federalism does have benefits vis-à-vis climate change governance in Ethiopia. This federal system encourages

nationalities to develop their culture, language, and local institutions, while also encouraging the amalgamation of indigenous knowledge and practices, which have played critical roles in the efforts made to adapt to and mitigate the effects of climate change. The devolution of power to the lower administrative structure facilitates the empowerment of communities at grassroots level and allows marginalized groups' voices to be heard. The take-home message from this analysis is the need to critically review, amend, and remove some articles in the federal and regional constitutions so that responses to climate change effects can be facilitated, coordinated, and improved. This will reinvigorate Ethiopia to realize a matured federal system predicated on multiple factors such as ethnicity, natural resources, agroecology, geography, and others.

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