

Assessment of Environmental Security from the Standpoint of Threat to National Security: The Case of Ethiopia

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Abstract

Different researches have revealed that Ethiopia has a number of environmentally-related problems that threaten national security. The country loses up to 2-6 percent of annual crop production due to climate uncertainties, with drought being the main national environmental challenge. Ethiopia has a high country risk index of 7.38, one of the highest in Eastern Africa, which underlies a high level of potential risk for conflict, both within the country as well as in the region. Again, Ethiopia has an environmental score of 7.67 which is a high risk level. Generally speaking, therefore, Ethiopia is identified as a hot spot for environmental concern. The main objective of this article is to present and discuss evidence of conditions of local environmental insecurity against the background of international experiences. This is with a view to justifying whether the country should consider or not the environment as a priority in its national security policy making and strategic planning. The article recommends reappraisal of existing environmental laws to take serious cognizance of environmental security as a major component of national security. The government is called to pay greater commitment and determination by establishing environmental security departments in the Ministry of Foreign Affairs, Ministry of Environment, Forest and Climate change, Ministry of Defense, and Ministry of federal affairs as well create common working platform among these ministries to provide intelligence and better readiness to combat any perceived threats emanating from the environment.

Key Words: Environmental Security, National Security, Institutions, Conflict, Policy

Introduction

The post-cold-war era brought new security challenges to the globe. The traditional state-centric and military-based approach to national security was no longer adequate because not only had it become redundant, albeit temporarily, but also it could not address emerging national, regional and international security threats. New global conditions like increasing population, industrialization, and globalization spurring greater economic, social and political interaction between and among nations and, thereby,

inducing new transnational threats such as environmental degradation, droughts, floods, diseases, ethnic violence, have given rise to the need to redefine security (Mathews, 1989). In response, scholars and politicians in the 1980s proposed a new thought on security called 'Modern View'. For example, Ullman (1983) discussed the concept of extended security that includes non-military threats comprising a range of policy options that directly or indirectly impact the quality of life for the national community.

Likewise, Mathews (1989) endorsed broadening the definition of security to include resources, environmental and demographic issues.

To date in security studies, there are two dominant schools of thought: traditional view and modern view. Traditional view, also referred to as a state centric view, focuses on the concept of the military in relation to the protection of the state. This view considers the nation-state as a reference object of security and the purpose is to summon military and economic power to safeguard the state, interests, as well as institutions and values. Although this view still dictates national security strategy of many countries, it has been criticized as narrow and too orthodoxy, that is blind to emerging national, regional and international security challenges. Conversely, the modern view recognizes that the stability and safety of a nation is shaped by multi-dimensional factors (UNDP, 1994). This school of thought, also known as the human-centered, takes the individuals as the primary reference object and concentrates on how best to protect them (Hough, 2004). It deepens security from nation-state to society to individual and widens it to include non-military threats. It further considers the role of not only countries but also other players, NGOs, and multinational entities. The major drawback of this view is the fact that it incorporates many issues and, as a result, sorting between ordinary developmental agenda and national security agenda is not easy. Nevertheless, different, but related thoughts on this view of security, namely, common security, global security, international security now exist (Korany, 2010).

It is within the framework of human-security that the concept of environmental security has gotten its greatest significance. Myers (1993) equates security with human well-being not only to protection from harm and injury, but also access to water, food, shelter, health and employment.

Three areas of importance of the interaction between the environment and security can be identified. First, scarcity of environmental resources could cause conflict: an overuse of and/or depletion of resources could have serious negative social, economic and political consequences with a potential to ultimately lead to instability. Second, uneven distribution of environmental resources could trigger tensions and violence: unless there is fair distribution of profitable resources such as oil, minerals, timber, and water these resources might end up becoming sources of curse rather than a blessing. Third, reducing and controlling environmental damage from military conflict is important too: this entails environmental impact assessment and remedial measures that need to be in place during armed conflicts, arms production and military maintenance operations.

In the modern Ethiopia history, the period when strong central government has been established under the era of Emperor Minilik II, following the fuel wood crises, one of the first state concerns towards an environment in Ethiopia came to the stage. At the time, both the Emperor and officials became increasingly convinced the need to protect the forest resources of the country. In effect, the then Ministry of Agriculture, which was established in 1908, mandated to play environmental role too. Accordingly, three major responsibilities were given to the ministry: promoting good farming practices and increasing agriculture and livestock production, disaster monitoring and prevention and environmental protection.

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The underlying cause for increased environmental concern and specifically forest resources could be, as might be guessed, is economical and environmental concern (Dessalegn, 2001).

Dessalegn (2001) described the environmental paradigm in the era of Emperor Haileselassie, who is the successor of Emperor Minilik II, as frontier economics. This paradigm which was dominant in many other countries until 1960s too, considers nature as an infinite supply of resources and to be exploited by human and having limitless potential to sink wastes. Under the era the major reason to protect natural resources like forest and other wildlife was to raise government income. Thus, using the support of UNESCO and expatriate staff, several national parks and game reserves were formed in the second half of 1960s and early 1970s. The other major area of concern in the mid-1960s was forest protection when a series of forest legislations were issued by government. The legislation puts all forests except those owned by individuals under state control. Such endeavors experienced a lot of challenges from the farming community. Furthermore, the era was characterized by limited environmental awareness by policy makers.

However, after the mid 1960's the emergence of pollution and biodiversity loss were the driving forces which weakened the frontier economics paradigm and replaced by deep ecology, a paradigm that make a compromise between development and environmental protection. In the last quarter of 1970s encouraged by donors environmental management tools like EIA (Environmental Impact Assessment) were emerged though not practiced (Dessalegn, 2001).

In the communist regime, Derge, which follows the preceding emperors, the environmental thought was both a mixture of frontiers economics and environmental conservation paradigms. Nonetheless, the conservation policy was the dominant one, which used a top down approach and characterized by construction of physical structures using food for work (FFW) program. Desalegn(2001) described two varieties of environmentalism in this era: state environmentalism and Peasant farmer environmentalism. Through state environmentalism, the government is the owner of the resources, choose the appropriate technology and transfer to the population which is unilateral excluding farmers and finally undemocratic. Therefore, such approach was in a contest with farmers' environmentalism and faced many resistances. One the other hand, the major governments' program in the era: collectivization, villagisation, and resettlement were also posed serious challenges for the realization of such state environmentalism as the programs were in many cases were degrading the nature causing massive deforestation and soil erosion. Furthermore, such programs were not backed by legislation and relying on mass mobilization and forced labor campaigns.

As explicitly expounded above, the different regimes in Ethiopia in the past had never considered environment as a threat to national security. However, environmental problems have become more intense and more important across years in Ethiopia, as the country repeatedly and with great magnitude threatened harshly by environmental perils. Studies show Ethiopia experiences a loss 2 to 6% of annual crop production due to climate instability (GTP I, 2010). The country's location in the Horn of Africa makes it vulnerable to regional desertification with vast amounts of land lost annually as a consequence. An average of 400 ton fertile soil per hectare is lost every year (FDRE, 2003). The pastoral culture present in many border areas like the Somali region with its insatiable dependence on water and lush grazing land as a means of livelihood is both causal as well as a casualty to drought and famine.

According to Giessen(2011) Ethiopia is a hot spot for environmental concern. Some of the regions like the Ogaden, the Nile, Gilgel-Gibe Dams and the Bale Mountains eco-region are highly conflict-prone

Therefore, the purpose of this article is to assess how the current Ethiopian government treats the environment as well as to contribute to the discussion by asking, ‘Does Ethiopia has to consider environmental security as one of its major priorities in national security policy and strategy? The objective of this article is to review the current security situation in the light of the imperative need for Ethiopia to reform and strengthen its national security by incorporating environmental security in its overall security policy.

Study Area

Ethiopia is the second most populous country in Africa next to Nigeria, with an annual growth rate of more than 2%. According to UNDP(2015), the Ethiopian population estimated to reach 100,658,562 as of January 2016; it is also expected to have more than 120 million people by 2030. It is a multi-ethnic country as well as Christianity and Islam live side by side peacefully. Ethiopia is among one of the world’s lowest urbanized countries, only 17 % of the population live in urban areas and of which a half lives in the country’s capital Addis Ababa (CRGE, 2012).

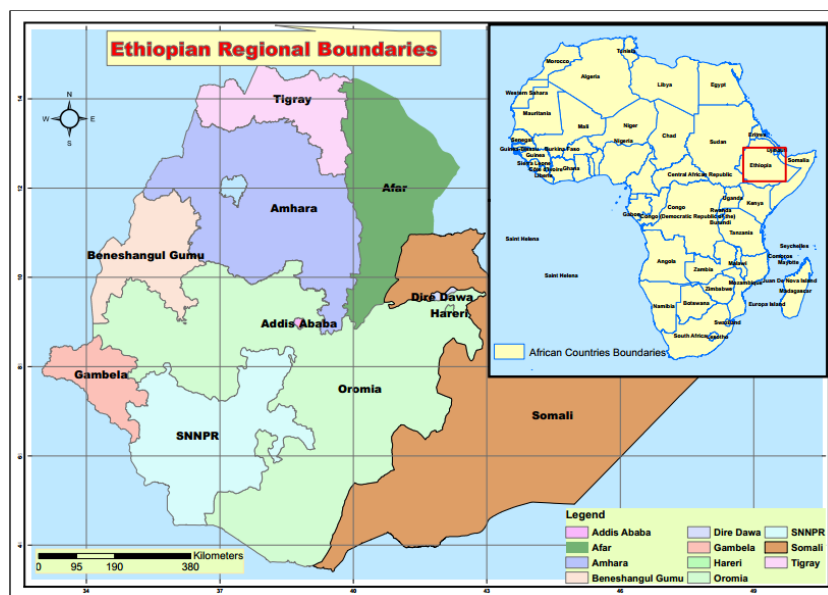


Figure1. Location map of the study area Source: DIVA-GIS and Ethio-GIS

Research Method

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The research used key informants as primary data sources while review of secondary literatures was the secondary data source. Key informants, who are senior professionals in areas related to environmental policy and security, were purposively contacted from the major stakeholder of this research, including the Ministry of Environment, Forest and Climate change, the Ministry of Foreign Affairs and the Ministry of Federal affairs; and semi-structured interview method was employed as data collection tool. Review of the literature was performed under two categories. First experiences showing how countries as well as international institutions considered environmental security in their national security policy and institutional arrangements were organized and disclosed. Second, various studies which were conducted in national (Ethiopia) and regional (Horn of Africa) context that displayed the past, present and forthcoming threats of environmental insecurity were rigorously described. Finally, both information from key informants and literature review were put together and synthesized to achieve the research objective.

Result and Discussion

Environment under EPRDF

Constitution and Environmental Policy

Ethiopia is repeatedly threatened on a massive scale by environmental problems viz., soil erosion(with associated land degradation), drought, deforestation, and floods. To this end the nation has spelt it out clearly in the constitution, policy and development documents the concern about the environment. Article 44 of the FDRE Constitution addresses the protection of the environment and declares citizen's right to a clean and healthy environment. Since 1994, the country has taken important steps through the enactment of environmental rights under the constitution, the adoption of the Environmental Policy and Conservation Strategy of Ethiopia, the ratification of multilateral environmental conventions, and the establishment of the Environmental Protection Authority (EPA, 2004).

The pillars of national security policy of Ethiopia are good governance, poverty reduction and fostering democracy (FANSPS, 2002). The policy document described globalization as one of the foundations underpinning national security, and actually associates globalization with global warming and trans-boundary rivers. It further details out climate change adaptation and mitigation of greenhouse gases.

The most important step in setting up the legal framework for the environment in Ethiopia has been the establishment of the Environmental Protection Authority (EPA) by Proclamation No. 9/1995 (EPA, 2004). The EPA has the powers and duties to prepare environmental protection policy and laws and implement them, to prepare directives and systems necessary for evaluating the impact of social and economic development projects on the environment, and to follow up and supervise their implementation (GISW, 2010).

The Environmental Policy of Ethiopia, 1997 constitutes eleven-sector and eleven cross-sector policy elements. Its overall policy goal is “to improve and enhance the health and quality of life of all Ethiopians, and to promote sustainable social and economic development through the sound management and use of natural, human-made and cultural resources and the environment as a whole, so as to meet the needs of the present generation without compromising the ability of future generations to meet their own needs” (EPA, 2004).

The sector policies include soil conservation, genetics, species & biodiversity, water resources, energy resources, mineral resources, control of hazardous materials and pollution from industrial waste, atmospheric pollution and climate change, cultural & natural heritage, forest & woodland, human settlement & urban environment. The cross-sector policies are population, community participation, gender, environmental research, environmental education, environmental information system, environmental economics, environmental impact assessment, land use, tenure & access (Miskir, 2008).

The Growth and Transformation Plan

In 2010, the Ethiopian government has endorsed Growth and Transformation Plan (GTP I) as major national development working document. Accordingly, the document states the environment was considered as one of the cardinal issues determining the country’s future, stating “climate change decisively influences sustainable development, the need for the development of green economy as well as the strong enforcement of the already formulated environmental laws and regulations” (GTP I, 2010).

Following the ending period of the first GTP document, the government of Ethiopia endorsed GTP II, which will cover 2015/16-2019/20 (GTP II, 2015). GTP II has set its objectives as the realization of the country’s visions becoming a lower middle income country by 2025. The Plan, which has nine pillar strategies, described “building climate resilient green economy “as one of the priorities. The document listed out the major activities or sectors: adaptation to climate change and mitigation of greenhouses gases, protection of forests for their economic and ecosystem services, expanding of electricity generation from renewable sources etc.

The plan has put its strategic directions: enabling the community to actively involve in environmental protection in general and forest development in particular, promoting mixed farming, implementing climate resilient green economy strategy at all administrative levels; and embarking on environmental protection and forest development.

Climate Resilient Green Economy (CRGE)

Even though Ethiopia is yet one of the least developed countries, as a responsible member of the world, designed green economy development path avoiding the conventional development path, which was pollutant wherever else in the globe. CRGE (2012) unveils “Ethiopia’s ambition to become a “green economy front-runner” is an expression of its potential for and belief in a sustainable model of growth”. The CRGE development path is designed to be well assimilated with the national development goals and objectives namely the GTP II. The underlying reason for why the country opted for such developmental path is associated with the fact that the country has already experienced the adverse effects of climate change: increased temperature and a change in rainfall pattern; and furthermore climate change presents

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the obligation and opportunity to shift to a new sustainable development model. The document stressed that the country should follow a sustainable developmental path against the conventional developmental path.

The green economy plan is based on four pillars: enhancing crop and livestock productivity while reducing emissions, development of forest resources for economic and ecosystem purposes as carbon stock, tapping electricity generation from renewable sources and promoting energy efficient technologies in transport, industry and buildings.

The initiative chosen sectorial approach and identified more than 60 initiatives which enable the government to achieve the national development goals while limiting emission rate at 250 Mt CO₂ by the year 2030. To realize such initiatives, the government has called the international community to support it like the climate finance schemes, bilateral and multilateral development partners as well as private sectors too. The CRGE initiative also outlines the structure of a permanent institutional setup to drive implementation, and to promote the participation of a broad set of stakeholders (Ibid)

Gaps of the main governmental institution in regard to Environment

The Ministry of Environment, Forest and Climate Change

By proclamation No.916/2015, which defines the powers and duties of the executive organs of the federal democratic republic of Ethiopia, the Ethiopian government established the ministry of environment, forest and climate change. The proclamation offered the newly established ministry sixteen major powers and duties and with especial connection to environmental security the mandate includes setting out favorable conditions that promote social, economic and environmental justice, formulation of environmental safety policies and laws on the production, importation, management and utilization of hazardous substances or wastes, propose incentives or disincentives to discourage practices that may hamper the sustainable use of natural resources or the prevention of environmental degradation or pollution, have paramount importance to focus on among the sixteen areas (FNGFDRE, 2015).

The ministry set its vision: to realize a country, by the year 2017, that attained middle income and green economy, which is not vulnerable to climate change, via securing sustainable environment and forest management, development of these resources and utilization. The objective that emanates from the vision is focused mainly on forest sector development and management. This is manifested through addressing the forest sector in separate while it treats the rest of the environment as a whole.

The Ministry being the primary executive governmental organization with regard to the environment, the technical unit exclusive of the support unit is organized into two major sub sectors that are accountable to the minister: forest and environment and climate change; each of the sub sectors comprised of four major directorates and that in turn each of them embraces directorates. It also encompasses two other technical departments that are directly accountable to the minister. With especial interest in relation to

environmental policy the directorate of study and research on policy, law and standards is one of the two such directorates; and one of its primary tasks is to discern new and emerging issues and problems of environment and forest with collaboration with the stakeholders. As forwarded by key informants, also this explicitly indicates the level of concern and practical measures the government issued policy issues, as it organizing it as a separate organizational entity. Moreover, as key informants assert too, furthermore, it manifests the stance of the government the need to research and incorporate new and contemporary environmental policy issues as well as its recognition of the progressive and dynamicity of environmental policies.

Despite, the new reorganization of the Ministry could be praised in many ways; yet, with regard to dealing with environmental security, based on the key informants' response, the Ministry does not have a permanent organizational working setup to work closely with major stakeholders such as the ministry of foreign affairs, the ministry of federal affairs and the ministry of defense. In the absence of such common platform, it is very unlikely to address cross sectorial issues of environmental security.

The Ministry of Federal Affairs and the Ministry of Foreign Affairs

The Ministry of Federal Affairs, which analyzes conflict from multi sources, is another major governmental executive organ to be considered with regard to environmental security. The directorate general of conflict prevention and resolution mandated different tasks in line with addressing the consequences of environmental insecurity. Conducting of conflict survey and analysis and providing recommendations for decision making and early warning at all levels is vital to be mentioned. The Ministry listed out its stakeholders including pastoralist societies, citizen, development partners among others; whereas, it overlooked the ministry of environment, forest and climate change. This explicitly implies the focus of the Ministry in dealing with conflicts emanating from environment is inclined to managing the conflict of pastoralist societies. Thus, conflicts induced in non-pastoralist communities that take the predominant share in the country in relation to environmental insecurity not only underestimated but also could be totally unnoticed.

The Ministry of Foreign Affairs, being one of the pertinent governmental bodies dealing with national security, is the other institution included in the study. With respect to environmental security, it established directorate general for Boundary and Trans Boundary. The directorate general besides dealing with other trans boundary issues, it engaged in analyzing and securing the country's interest on its trans boundary resources. In this regard the major focus has been the fair and the just utilization of its major trans boundary river: the Blue Nile. Though, the lion share of the Ministry's tasks are inherently external issues, and environmental security is not an exception, and it allocated the department accordingly; still, unless it meticulously work together with the major stakeholders such as the Ministry of Environment, Forest and Climate Change and the Ministry of Defense, it possibly will not be sufficiently deal with trans boundary resource issues as the sustainable and effective management of natural resources should consider all the stakeholders that often spans for large area. Key informants, both from the Ministry of the Federal Affairs and the Ministry of Foreign Affairs in agreement with the key informants from the Ministry of Environment, Forest and Climate Change confirmed the lack of common and permanent platforms for such ministries to address environmental security. Therefore, it is clear that such institutions are engaged in environmental security issues separately; and they overlooked

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the urgent need of having not only coordinated and focused but also permanent and long standing working environment that ultimately end up un tackling environmental insecurity.

Environmental Perils Facing Ethiopia

Country Risk Assessment Report

A Country Indicator for Foreign Policy (CIFP) of assessing Country Risk in the regional context released a report in the year 2002 (Caroline and Sonja, 2002). The report revealed an indicator-based assessment of conflict risk in sub-Saharan Africa from the cross analysis of nine interrelated issue areas identified as underlying potential for conflict development: history of armed conflict, governance and political instability, militarization, population heterogeneity, demographic stress, economic performance, human development, environmental stress and international linkages. Risk indices register on a scale of 0 to 12 where 0 to 3.4 are considered low risk, 3.5 to 6.4 are considered medium risk, 6.5 to 9.4 are considered high risk, and 9.5 to 12 considered very high risk. In general terms, the factors that contribute to conflict escalation are categorized as “structural factors”, “accelerators” and “triggers”. Structural factors or “root causes” are those factors that form the preconditions of crisis situations such as systematic political exclusion, shifts in demographic balance, entrenched economic inequities, economic decline and ecological deterioration; “Accelerators” or “precipitators” are factors that work upon root causes in order to increase their level of significance and “Triggers” are sudden events that act as catalysts igniting a crisis or conflict such as the assassination of a leader, election fraud or a political scandal.

Country	Total score	Level of risk
Djibouti	5.75	Medium risk
Eritrea	7.47	High risk
Ethiopia	7.38	High risk
Somalia	5.43	Medium risk
Sudan	6.98	High risk
Kenya	6.18	Medium risk

Table 1. Country Risk Assessment for some East African countries

As shown in Table 1, East Africa is highly susceptible to conflict and in particular countries such as Ethiopia, Eritrea and Sudan have got high risk ratings. On the other hand, other important parameters called environmental score, which composed of three sub indicators: rate of deforestation, people per square kilometer of arable land, and fresh water resources unveils similar scenario. The following table revealed the environmental stress output for East African countries.

Country	Environmental Score	Level of risk
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Djibouti	6.00 (using one indicator only)	Medium risk
Eritrea	8.00	High risk
Ethiopia	7.67	High risk
Somalia	7.5 (using two indicators only)	High risk
Sudan	5.33	Medium risk

Table 2. Country Risk Assessment for some East African countries (for environmental stress indicator).

As shown in table 2 except Sudan and Djibouti, all the countries are facing a high risk using the environmental score indicator. Generally the above tables indicated that East African region as a whole including Ethiopia is facing a high risk of conflict.

Conclusion and Recommendation

With a higher country risk index value of 7.38, which is the highest in Eastern Africa, Ethiopia faces a high level of risk for conflict as a country. Likewise, the country's environmental score of 7.67 is a high risk level and Ethiopia is identified as a hot spot for environmental concern.

To date countries such as USA, UK, China; and international institutions: UNEP, NATO, IGAD, and the African Union has paid due attention to the very importance of environmental security as a national or international threat.

Ethiopia is also currently considers the human-angle security school of thought with scant regard for environmental security and it paid due consideration to the development of a green economy. Yet there is a huge gap in terms of strengthening the national security policy with regard to environment as well as establishing of the institutions. That is the pertinent governmental institutions on environmental security work separately and their efforts are uncoordinated; and common working platforms are absent. In this regard, the following recommendations are considered to be critical.

First, the Ethiopian government further should clearly and without ambiguity state on the national security policy the urgency of environmental security as a major national threat to equal status that it endowed to poverty reduction, good governance and democracy.

Second, in all of the major governmental institutions engaging in environmental security: the Ministry of Environment, Forest and Climate Change, the Ministry of Federal Affairs and the Ministry of Foreign Affairs, the organization of directorates and departments working on environmental security should be reconsidered for better strengthening and capacitating them with strong consideration of environmental security as a national threat.

Third, a strong and permanent working institutional linkage that creates a common platform for such institutions is compulsory as well. The Ministry of Environment, Forest and Climate change, and the

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Ministry of Federal Affairs should work together creating enduring common governmental structure that replace the so far their sole addressing of environmental security issues.

Fourth, the Ministry of Defense ought to strengthen its attention to the links between security, environment and social pressures. Hence, it requires to devise common working podium with the Ministries of Foreign Affairs, Environment, Forest and Climate Change appreciating environmental security as a major national security threat.

Furthermore, taking the lesson from china the national defense of Ethiopia must create an organizational capacity, which focuses on studies of the impact of climate change on military operations and to serve as intelligence for future strategic planning.

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