THE ENVIRONMENT AND SECURITY NEXUS IN WEST AFRICA AND THE SAHEL REGION

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Abstract

West Africa and the Sahel region are grappling with several security challenges in the post-colonial era. The geopolitical architecture vis-à-vis the ecological characteristics of these regions has in no small way contributed to precipitating insecurity. This paper, therefore, is an attempt to analyse the nexus between environment and security with a view to bringing to bear the modern understanding of security. It is secondary research and it adopts Homer-Dixon's theory of resource scarcity. It is the position of this paper that environmental variability in West African and the Sahel has given rise to the manifestation of conflicts and insecurities. The farmers-herders conflict, banditry, Niger Delta conflict, trans-border crimes, insecurity in the Lake Chad Basin, etc are instances of environmentally induced crises. It recommends, among other things, the need for countries in West Africa and the Sahel to put in place early warning systems and strategies to check environmental degradation.

Keywords: West Africa, the Sahel, security challenges, transborder crimes, Early warning systems, environmental degradation

Introduction

The ecosystems reflect a complex interdependent web of living organisms and natural resources, play a critical role in supporting human wellbeing and driving economic growth through the valuable services they provide such as food, water for drinking and

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irrigation, pollination, and climate regulation. Yet human society has systematically undermined these natural allies, treating forests, arable land, and rivers as though they are inexhaustible (UNEP, 2013). Refocusing security thinking on the factors that render humans insecure in specific places means taking the geographical dimensions of insecurity seriously. While the local disruptions in particular places remain the focus of much analysis, in light of the discussions of resource wars and globalization, now the distant consequences of both resource extractions and subsequent pollution and consequent atmospheric change also have to be included. An ecological approach is now essential in which human activities are understood as part of the biophysical processes of global change; global environmental change and economic globalization are effectively two ways of looking at the same process of change (Dalby, 2006). The Sahel region is the area of Africa lying between 12°N and 20°N. This area shares two climatic characteristics: one rainy season per year and August as the month of highest precipitation.

The area covers all or part of 12 countries from the Atlantic coast to the Red Sea: Mauritania, Senegal, The Gambia, Mali, Burkina Faso, Niger, Nigeria, Chad, Sudan, Ethiopia, Eritrea, and Djibouti (Marie Trémolières, 2010). There is a causal relationship between climate variability and human security as evidenced in several parts of the international system. This variability has in different instances contributed to conflicts. This school of thought is based on the premise that, because of their source or their gravity, environmental problems can be a hazard to a state's national security. It would be affected to various degrees, depending on whether such problems trigger social unrest, political instability, economic difficulties, and threats to territorial integrity, diplomatic tension, or even open warfare. The studies are therefore interested in the conflict dimension of interstate relations as they crop up in political, economic, diplomatic, and military confrontations stemming from environmental antagonism, be it local, regional or global in nature (Frederick, 1993).

Concept of Security

The concept of security is plethora in nature. Several attempts have been made by several scholars to conceptualise security from different perspectives. There has been a paradigmatic shift in the understanding of security. In the view of Gallie (1995:167), the term 'security' has become an 'essentially contested concept', in that there are no assumptions of agreement as to its meaning and that this lack of agreement constitutes a widely recognised ground for philosophical inquiry. Wolfer (1962) points out the importance of perceptions within the meaning of security: `. . . security, in an objective sense, measures the absence of threats to acquired values, in a subjective sense, the absence of fear that such values will be attacked.

The two main notions of security in international relations have shaped scholarly discussions about this term: realist and idealist-inspired security ideas. The realist school sees security as a derivative of power: an actor with enough power to reach a dominating position would acquire security as a result. On the other hand, the idealist school sees security as a consequence of peace: a lasting peace would provide security for all (Buzan, 1991). Lipmann (1943:32) defines it by stating that "a nation has security when it does not have to sacrifice its legitimate interest to avoid war, and is able, if challenged, to maintain them by war. To Baldwin (1997), seven specific questions are important for the analysis of the security concept. The questions are: (1) Security for whom? (2) Security for which values? (3) How much security? (4) From what threats? (5) By what means? (6) At what cost? (7) In what time period?

Concept of Environmental Security

The concept of environmental security falls within the purview of the modern understanding of security. It is an attempt to explain the nexus between environment, ecological variables, and national security. Environmental security has been described as a bundle of issues that involves the role that the environment and natural

resources can play in peace and security, including environmental causes and drivers of conflict, environmental impacts of conflict, environmental recovery, and post-conflict peacebuilding. The scope of security and insecurity is by no means limited to violent conflict or its absence but includes the roots of sustainable livelihoods, health, and well-being (GEF STAP, 2014). Global Environmental Facility (GEF) Report of the Scientific and Technical Advisory Panel (STAP) posits that:

> Environmental security underpins the rationale for investment in global environmental benefits and is essential to maintain the earth's life-supporting ecosystems generating water, food, and clean air. Reducing environmental security risks also depends fundamentally on improving resource governance and social resilience to natural resource shocks and stresses. The environment is better protected in the absence of conflict and the presence of stable, effective governance (GEF STAP, 2014:3).

The Security Council of the Russian Federation (1996:55) sees environmental security as:

> Environmental security is the protectedness of the natural environment and vital interests of citizens, society, the state from internal and external impacts, adverse processes, and trends in development that threaten human health, biodiversity, and sustainable functioning of ecosystems, and survival of humankind. Environmental security is an integral part of Russia's national security.

United Nations Environment Programme describes environmental security as a "conceptual envelope" including a variety of issues involving the role that the environment and natural resources can play across the peace and security continuum, including environmental causes and drivers of conflict, environmental impacts of conflict, environmental recovery and post-conflict peacebuilding (UNEP, 2016). According to the Global Environmental Facility (GEF) (2014), there are four dimensions of environmental security and they are:

i. Ecosystem goods and services fundamentally underpin human well-being and human security.
ii. Conflict affects the viability or sustainability of investments in environmental protection and their outcomes, regardless of its source
iii. Ecosystem degradation, resource competition, or inequitable distribution of benefits increase vulnerability and conflict risk
iv. Environmental cooperation can increase capacity for conflict management, prevention, and recovery.

To corroborate the above point, Jerome, Theodore, and Renat (1998) identified the following as key elements in environmental security:

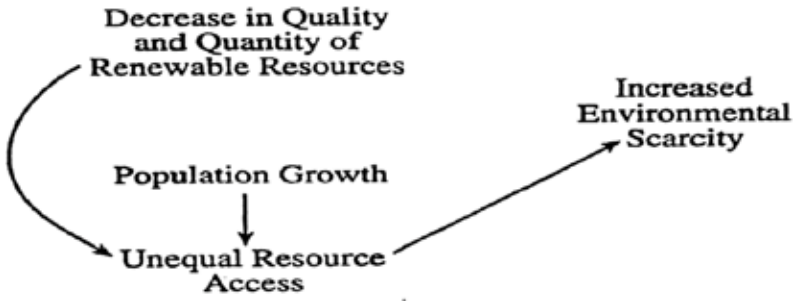
i. Public safety from environmental dangers caused by natural or human processes due to ignorance, accident, mismanagement, or design.
ii. Amelioration of natural resource scarcity.
iii. Maintenance of a healthy environment.
iv. Amelioration of environmental degradation.
v. Prevention of social disorder and conflict (promotion of social stability)

Theoretical Framework

Homer-Dixon's theory of environmental scarcity provides an analytical relationship between environmental factors and conflict in human society. Scarcity of renewable resources—or what I call environmental scarcity—can contribute to civil violence, including insurgencies and ethnic clashes" (Homer-Dixon, 1999). Homer-Dixon predicted that "in coming decades the incidence of such violence will probably increase as scarcities of cropland, fresh water, and forests worsen in many parts of the developing world." Homer-Dixon's theory integrates physical variables (the stocks of natural resources, population size and growth, and resource-consumption per capita) and social factors (market dynamics, and social and economic structures) in a single model that emphasizes the

importance of thresholds, interdependence, and interactivity within complex environmental systems (Homer-Dixon, 1999). Hartmann (2017) has also contributed to the discourse on the relationship between environment and conflict when he presents the idea of strategic scarcity and environmental conflict. The figure below is used to express diagrammatically the nexus between resource scarcity and conflict.

Figure 1: Environment, Strategic Scarcity, and Conflict



Source: Hartmann (2017).

Relating Homer-Dixon's theory of resource scarcity to the correlation between the environment and security in West Africa and the Sahel one would see an obvious nexus. For instance, the major remote and immediate precipitators of the conflict between pastoralists and farmers in both West Africa and the Sahel hinges basically on the environment. Issues of draught, water/rain, inadequate pastures, population expansion, migration, deforestation, and land tenure system are all environmental factors. The scarcity of these environmental variables vis-à-vis the increasing demand for them by both farmers and pastoralist constitutes the triggers for pastoralist-farmers conflict. The insecurity in the Niger Delta Region of Nigeria orchestrated by the militants is also precipitated by the impact of activities of oil multinationals in that region which have a negative impact on the environment. Oil spillage, environmental degradation, gas flaring, and water pollution have adverse effects on human,

aquatic, and other agricultural activities within the Niger Delta Region. Contestations of ownership of resources have accounted for series of conflicts.

An analysis of the Nexus between Environment and Security in West Africa and the Sahel

The relationship between environment and security has been under consideration since the 1980s mainly by two groups: (1) the environmental policy community, addressing the security implications of environmental change and security, and (2) the security community, looking at new definitions of national security, particularly in the post-Cold War era (Andree,2012). There is much research focusing on the nexus between environmental change and security that argues over whether environmental issues should be considered as a type or source of threat to security (Gleditsch, 1998; Hauge and Ellingsen, 1998). The contention that environmental degradation would cause misery, and probably conflict, in many situations, was frequently taken as axiomatic. What was far from clear, however, was precisely how insecurity would manifest itself and who would be the victims (Dalby, 2006).

Since the start of the new millennium, the world has witnessed over 40 major conflicts and 2,500 disasters, killing millions and affecting over 2 billion more. Not only do these tragic events destroy infrastructure, cause displacement and undermine human security, but they also degrade or destroy natural resources such as water, land, and forests essential for communities to recover. Environmental degradation and the mismanagement of natural resources are themselves risk factors for sparking renewed cycles of conflict and can result in further environmental damage, thus undermining stability and opportunities for sustainable development (UNEP, 2013). The Sahel is seen as highly vulnerable to the impacts of climate change as a result of its reliance on rainfed agriculture, decreasing land productivity, low levels of development, weak infrastructure, largely non-existent social safety nets, and high exposure to natural disasters and economic shocks. Periodic droughts caused great hardship in

the 1910s, the 1940s, and between 1968 and 1993 (Descroix and Lambert, 2018). Serious floods have also been a major problem, striking Dakar in 2012, Ouagadougou in 2009, Bamako in 2013, and Niamey repeatedly (in 2004, 2010, 2012, 2013, and 2016) (Descroix and Lambert, 2018).

Climate change and its impact have dominated international policy agendas and public attention in recent times. The focus on the security implications of climate change has helped to bring climate change to the realm of international policymaking by placing it as a key threat to the state and global stability. Recent events in the Sahel, drawing attention to its role in the development of international terrorism and illegal trafficking and its particular vulnerability, place this region of Africa at the centre of global security concerns (SWAC/OECD, 2010). Frederick (1993) highlights two types of links relevant to the discussion on the nexus between environment and security: The first deals with environmental problems as the main insecurity factor. The scenarios are based either on confrontations arising from local or regional ecological conflicts (trans-border pollution, overexploitation of a common resource, etc.) or on a transformation of power relationships within a region – or among several regions as a result of major environmental disturbances (climatic changes, desertification, ecological accidents and the like). The second deals with environmental problems as an ancillary insecurity factor. In such cases, environmental antagonisms threaten a state's national security indirectly, by exacerbating pre-existing political, economic, social, or military tensions or conflicts or by adding a new dimension to them (Holst, 1989).

Guinea, the Gambia, Côte d'Ivoire, Nigeria, and Senegal, as coastal countries, are also highly vulnerable to environmental changes in the form of coastal erosion, soil salinization, and land degradation. Senegal ranked as the world's eighth most at-risk country in terms of sea-level rise (Amara, et. al., 2019). Tensions between farmers and pastoralists in Burkina Faso's Comoé province (1986 and 1995) were driven by a combination of factors including demographic pressure on fertile lands (settlement and sedentarisation of pastoralists as a

result of the drought), co-existing economic modes, and changes in livelihoods, soil degradation caused by human activity, land policies and weak regulatory mechanisms. Environmental variables seem to be interwoven with other variables without any real way to establish a dominant role for one or the other (SWAC/OECD, 2010).

Historically the population of the Sahel was made up of semi-nomadic pastoralists, with some farmers practicing agriculture where the soil and rain conditions would permit. Farmers and herders have a history of mostly peaceful cooperation over resources; these interactions were shaped by customary rules about resource access and traditional mechanisms for resolving disputes (Scheffran et al., 2019). In parts of Sahelian West Africa, the severe droughts of the 1970s and 1980s caused a southward shift of semi-nomadic herders who moved to find pasture during the droughts that, in some cases, caused them to settle in areas where they had previously only spent part of the year. In essence, these farmer-herder conflicts are a result of a seasonal incompatibility between the two livelihoods. Such differences become particularly acute when farmers are attempting to harvest their crops after the rainy season without damage from passing livestock (Brottem, 2016).

Abbass (2012) has argued that the exacerbation of vulnerability and conflict in Northern Nigeria is both a product of the impact of climate change and drought leading to competition between farmers and pastoralists. Fulani militants were responsible for about 1,229 deaths in 2014 in Nigeria. The first quarter of 2016 also witnessed about 488 deaths in the country which were attributed to Fulani herdsmen, compared to 330 by Boko Haram in the same period. The Fulani ethnic group has a great majority of its people as herders, and their attacks are either for gaining access to grazeable land for their cattle, or retaliation for the killing of their kinsmen (Burton, 2016). In the 1960s, as a result of deforestation and the resort to improper agricultural practices and population increase, there was widespread soil erosion in Ethiopia's Highlands. The result was a decline of farmland, the inefficiency of agriculture, food shortages,

and exploding prices leading to urban riots. Neighbouring Somalia had to face similar problems. Most of Somalia's rivers rise in Ethiopia, and Somalis worried that Ethiopian migrants might divert water for irrigation. In 1977 the two countries went to war until 1979. Supported by the late superpowers with the supply of arms, the region could not yet recover properly (Kirchner, 2010). The impacts of environmental damage can pose a threat to either global security or regional security.

At the regional level, security may be threatened as a result of the unsustainable use of shared natural resources, or because of transboundary pollution. In such instances, concerted preventive actions might be appropriate and adequate (Kirchner, 2010). Periodic droughts in the Sahel have had cascading impacts on the broader hydrology of the region. For example, the 'grande sécheresse' of 1968 to 1993 resulted in an average reduction in rainfall of 25%-30%, but the major river basins experienced a drop in flow that was twice as large, with a reduction of 55% of the flow in the Senegal river basin and 60% in the Niger river basin, and a 90% drop in the size of Lake Chad (Decroix and Lambert, 2018).

However, the main climate-induced risk relevant to Nigeria is due to the decreased economic opportunities. A total of 60 percent of Nigeria's population and three-quarters of its unemployed are under 30 years of age. Evidence suggests that disenfranchised young people who lack resources and economic opportunity are more likely to join violent non-State groups (Langer and Ukiwo, 2011) such as paramilitary forces. Nigeria has also witnessed how the climate-migration dynamics contribute to increasing violence and conflicts. The shrinking of Lake Chad has become a threat for over 15 million Nigerians living in the area and about 10 million others living outside Nigeria's shores (Akubor, 2017). The changes in the environment and the scarcity of resources worsened pastoralists' relationship with farmers as well as the intensity and magnitude of pastoralists' movement southwards. This exodus in search of pasture land caused widespread conflicts and violence (Akubor, 2017).

Within the context of geopolitical theory reflects the nature of trans-border and trans-human activities within the continent of Africa. Issues of trans-border crimes occasioned by porous borders and poor border management reaffirm the reason why borderlines are characterized by crimes. For instance, in the Lake Chad Basin, the porous nature of boundaries, the existence of smuggling networks, suspicion amongst countries of the region, etc have all conspired to bring about massive proliferation of SALWs to sustain Boko Haram insurgency in the region (Tar and Adejoh, 2021). Located in west-central Africa, Lake Chad's dynamic nature, as seen in its size, shape, and depth, is constantly changing in response to variations in temperatures and rainfall. A variety of ecological zones surround the lake, including deserts, forests, wetlands, savannas, and mountains (Ovie and Emma, 2011). The receding of the lake has contributed to the dwindling fortune of the region. Before the current state, the lake waters supported massive agricultural production: fishing, animal husbandry, and growing of food crops (such as cotton, groundnut, cassava, millet, onions, rice, maize, and sorghum), which in turn supported the economy of the region (Odada, et. al., 2006).

The rate of hydrological changes in the basin is unprecedented. Between 1960 and 2000, the region where the lake is located experienced one of the most substantial and sustained reductions in rainfall events recorded anywhere in the world (Intergovernmental Panel on Climate Change [IPCC], 2001). In 2003, the lake region was classified among the ten most water-impoverished locations in the world (UNEP, 2003). Hydrological and biophysical changes resulting from natural climatic variability and various human activities threaten the entire Lake Chad basin, the lake itself, and the natural resources and ecosystem services used by communities to pursue their livelihoods (UNEP, 2004).

Over the past half-century, Sudan's Darfur region has experienced rapid population growth, periodic drought, and, since 2003, a devastating conflict that has forced over two million people to flee. The concentration of displaced people in nearby camps, coupled with the region's rapid population growth, has put further pressure

on vital natural resources such as land, water, and forest resources As this fragility and scarcity of resources contributed to conflict in the first place, worsening the natural environment that so many depend on is neither sustainable nor supportive of economic recovery and peace (UNEP, 2013:22).

The crisis in the Niger Delta region of Nigeria is another evidence of resource-based violence with the impact of human activities on the environment. The major activities of the oil industry that negatively impact the Niger Delta area are gas flaring and oil spillages. These unchecked environmentally unfriendly activities of the oil industry make the utilization of the environment for the livelihood of the local people unsustainable (Obi 1997). The Niger Delta region is the soul of the oil industry in Nigeria. It is the place where most of the production occurs. Thus, the physical environment of the Niger Delta is intricately linked to oil production. The exploration and production of crude oil by multinational companies has been unfriendly to the Niger Delta natural environment (Opukri and Ibaba 2008). According to Nigeria's Department of Petroleum Resources (DPR), approximately 2,369,470 barrels of oil were spilled in 4,647 incidents between 1976 and 1996 (Nwilo and Badejo 2008: 1221). The spills endanger the livelihood of the local communities. These environmental problems have led to the incessant violent confrontations that characterize the oil companies' relations with host communities. Another major oil exploration and production activity that endangers the environment is the flaring of natural gas, which also harms humans and animals.

While analysing the trends and conditions in the Niger Delta region of Nigeria using Ogoni as a case in point, Okonta (2005: 10) posited thus:

> Oil exploration has turned Ogoni into a wasteland: lands, streams, and creeks are totally and continually polluted; the atmosphere has been poisoned, charged as it is with hydrocarbon vapours, methane, carbon monoxide, carbon-dioxide and soot emitted by gas which has been flared twenty-four hours a day for thirty-three years in very close proximity

> to human habitation. Acid rain, oil spillages, and oil blowouts have devastated Ogoni territory. High-pressure oil pipelines crisscross the surface of Ogoni farmlands and villages dangerously.

Though a border crisis, the Bakassi Peninsular crisis between Nigeria and Cameroon has an environmental dimension to it. The peninsular is richly blessed with resources that can be converted for economic prosperity. It was not until it became clear after the discovery of large deposits of crude oil in adjoining offshore waters around the Rio del Rey area in the late 70s and early 80s that both countries realized that the Bakassi peninsula may indeed be a treasure of immeasurable economic value. Besides oil, the Bakassi Peninsula and its surrounding waters are located where two great ocean currents meet making conditions very favorable for a large variety of fish and other forms of maritime wildlife to grow and reproduce.
In an attempt to further diagnose the responses of both Nigeria and Cameroon vis-a-vis their national interest Che (2007:15) claims that:

> The reason both countries did not pay attention to Bakassi is in part because it was a remote area inhabited by people considered to be non-consequential. When oil and other natural resource and minerals were discovered in the peninsula, attention from both countries and also from their colonial connections was ignited thus creating tension, argument, and in some cases death. This is sad and really hypocritical because if oil was never discovered in this region, both regimes would have cared less about the region with its poor, remote, marshy, and non-consequential inhabitants

It is pertinent to note that in the realization of the impact of the environment on security, several international, regional and national efforts and programs have been put in place in an attempt to ameliorate these situations. The table below identifies some regional efforts at minimising the threats posed by environmental induced conflicts.

Table 1. **National and Regional Efforts/Strategies for addressing Environmental Induced Conflict**

S/N	**Organizations/Initiatives**	**Member Countries**	**Objectives**
1.	The Lake Chad Basin Commission	Established in 1964 by Chad, Cameron, Niger, and Nigeria	An intergovernmental organisation to oversee water and natural resource use in the Lake Chad Basin. Its mandate is to promote regional integration, peace, and security
2.	G5 Sahel	Established In December 2014, by Burkina Faso, Chad, Mali, Mauritania, and Niger	An institutional framework for regional cooperation on development policies and security matters.
3.	The Sustainability, Stability, and Security (3S) Initiative	Benin, Burkina Faso, the Central Africa Republic, Chad, the Gambia, Ghana, Mali, Morocco, the Niger, Nigeria, Rwanda, Senegal, Zambia, and Zimbabwe	Established in November 2016 to address the underlying causes of instability in Africa, especially migration and conflict related to the degradation of natural resources.
4.	Alliance du Sahel	Mauritania, Mali, Niger, Burkina Faso and Chad, Italy, Spain, the United Kingdom, Luxembourg, Denmark and Netherlands, and other partners	Established in 2017 to enhance the stability and development of the Sahel region

Source: Compiled by the author

Conclusion and the Way Forward

The correlation between environment and security in the Sahel and West African regions cannot be overemphasized. The modern perspectives of security have broadened its scope to capture how environment, weather and other ecological factors can precipitate security threats and challenges. This is not just peculiar to Africa. Ecological and environmental variations have accounted for different forms of insecurities either by serving as springboards for insecurity or as security threats in themselves. Pastoralist-farmers conflict is a form of rural violence that is manifested in different parts of Africa particularly in the Sahel region and sub-Saharan Africa. Environmental and ecological variables are at the heart of the Pastoralist-farmers conflict. Climate change, drought, desertification, population growth, land ownership systems, etc., are key precipitators of the conflict. The crisis in the lack Chad Basin, the Niger Delta crisis in Nigeria, and the Bakassi Peninsular crisis between Nigeria and Cameron as cases in point of environmentally induced conflicts. Based on the above analysis, this paper puts forward the following recommendations:

i. There is the need for an early warning system born out of relevant climate-fragility risk assessments needs
ii. National and regional frameworks and policies put in place to address environmental induced conflicts need to be strengthened.
iii. The effective and efficient use/application of modern technology is encouraged to cushion the effects of climate change on the ecology of the region in focus.

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