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Environmental degradation, livelihood, and the stability of Chad Basin Region

Saheed Babajide Owonikoko  and Jude A. Momodu

Centre for Peace and Security Studies, Modibbo Adama University of Technology, Yola, Adamawa State, Nigeria

ABSTRACT

The socio-economic conditions of the inhabitants of Lake Chad Region (LCR) in the instability of the region has been well researched. But there has been relatively little work on how environmental conditions contribute to the expanding instability of the region. Using data collected from both primary and secondary sources, this study shows how the shrinking Lake Chad contributes to the instability of the LCR. The study finds out that in the last six decades, climate change, over-exploitation and demographic pressure have contributed to the shrinking of the waterbody by over 90% leading to inability to sustain livelihoods of inhabitants. Loss of livelihoods has promoted criminality, easy recruitment by terrorist groups, migration to urban centres in search of better means of livelihood. This has also led to violent clashes and crimes in cities and towns. Furthermore, management of the shrinking lake has caused conflicts among the riparian states and this has greatly inhibited their ability to collective fight insecurity in the region. The study concludes that in enhancing the stability of the Lake Chad Region, addressing the shrinking Lake Chad must be given priority by the riparian states and other concerned stakeholders.

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KEYWORDS Environmental degradation; climate change; Lake Chad; livelihood; Chad Basin Region

Introduction

Chad Basin is one of the regions in sub-Sahara Africa. It is named after a shallow endorheic lake in the Sahel called Lake Chad. The Lake Chad covers an elongated area stretching approximately 1,000 kilometres (km) from north to south and 500 km from east to west comparable to the size of France.¹ While four countries – Nigeria, Niger, Chad, and Cameroon – directly share borders of their peripheries with the waterbody, a few other countries are also indirectly connected to the lake. These countries include Algeria, Libya, Central African Republic (CAR) and Sudan. All these countries relate to the lake in various ways and varying degrees. However, the Chad Basin Region in

CONTACT Saheed Babajide Owonikoko  owonikoko.babajide@mautech.edu.ng  Centre for Peace and Security Studies, Modibbo Adama University of Technology, Yola, Adamawa State, Nigeria

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the context of this study refers to the core countries sharing boundaries with the Lake.² Apart from the binding factor of the Lake, these countries share similarities in two different other ways. Firstly, they are rich in mineral resources (see Table 1). Secondly, they are highly unstable in security. Lake Chad area is also characterised with mobility, trade, and cross-border ethnic identities. This makes it difficult to distinguish the area from the countries whose borders form the area. Further, this is why the region is regarded as a system or an organised entity rather than detachments from the Chad Basin countries. The area has long been politically marginalised by the riparian states, receiving little or no basic services such as health or education for decades. However, the lake provided the people with means of livelihood which makes inhabitants feel little or nothing about absence of government.

While the individual countries composing the Lake Chad Basin region are highly unstable internally, the area regarded as Lake Chad itself, that is, the area bordering the Lake from the core Lake Chad Basin countries, is more unstable. It is considered one of the most fragile regions in the world. Activities of *Jama'atu Ahlissunnah Lidda'awati wal Jihad* otherwise known as

Table 1. Natural Resources Composition of Lake Chad Basin Countries.

S/ N	Country	Natural Resources	Estimated Population
1	Nigeria	Natural gas, petroleum, tin, iron ore, coal, limestone, niobium, lead, zinc, arable land.	195 million as at 2018
2	Cameroon	petroleum, bauxite, iron ore, timber, hydropower, arable land	23,130,708 as at July 2014
3	Niger	uranium, coal, gold, iron ore, petroleum, phosphates, Molybdenum, gypsum, salt.	17,466,172 as at July 2014
4	Chad	Petroleum, uranium, natron, kaoline, fish (Lake Chad), Gold, limestone, sand and gravel, salt.	11,412,107 as at July 2014

Source: Adapted from Central Intelligence Agency (CIA) World Factbook.



Figure 1. Map Showing Boundaries of Chad, Niger, Nigeria, and Cameroon to the Lake Chad. Source: Albert, 'Rethinking the functionality of the Multinational Joint Task Force in Managing the Boko Haram Crisis in the Lake Chad Basin', 122.

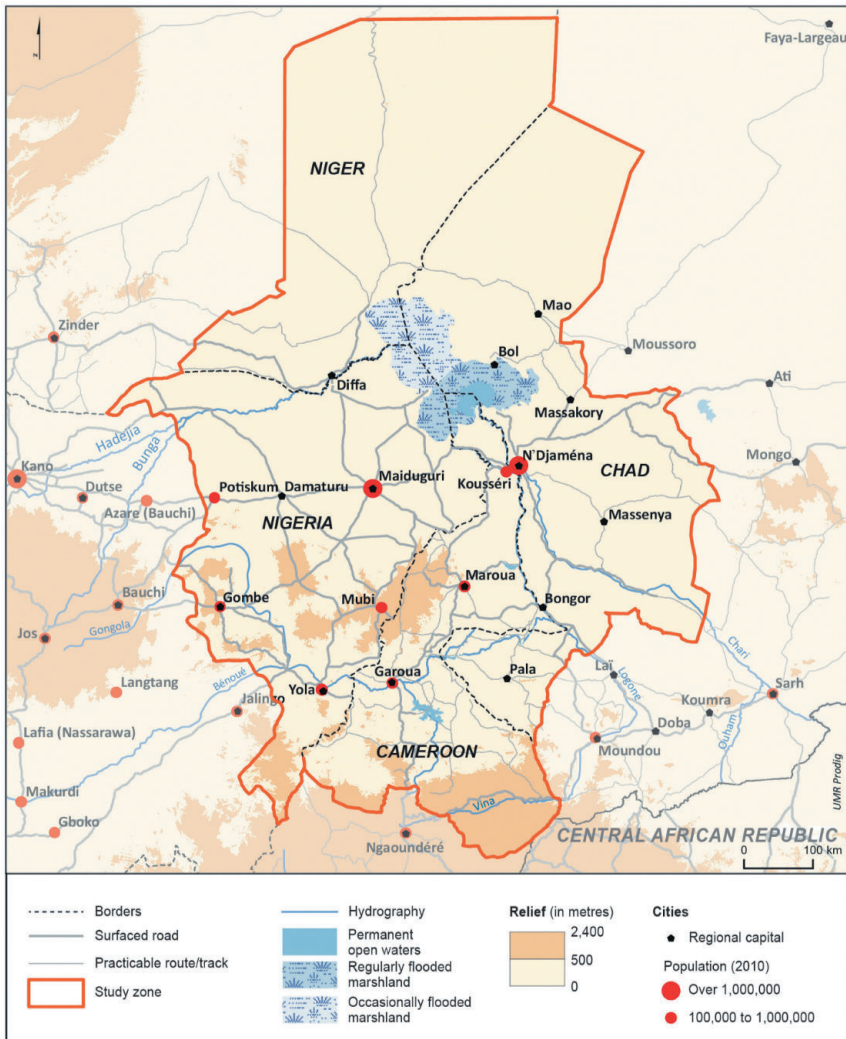


Figure 2. Map Showing the Coverage of Lake Chad Region. Source: Geraud and Marc-Antoine, Op. cit, 13.

Boko Haram and Islamic State in West Africa Province (ISWAP) is often deemed largely to be responsible for the instability of the region. However, there is more to the region's instability than the activities of this groups. Various other transnational and cross-border criminalities such as rural banditry, farmer-pastoralist conflicts, cattle rustling, kidnapping, trafficking of human, drugs, and arms, and so on are high in the region. The instability of the region is not a recent phenomenon. As far back of 1960s, the region came under the intense outbreak of banditry. This necessitated the formation of

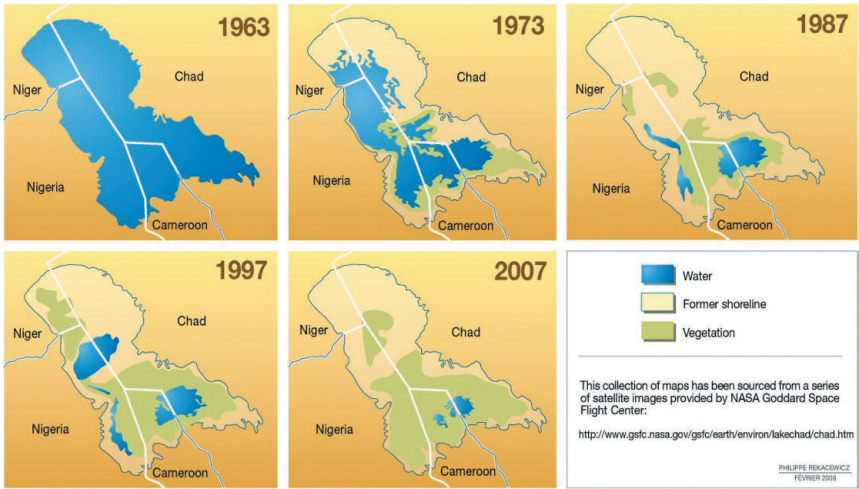


Figure 3. Transformation of the Lake Chad Since 1963. Source: Rekacewicz, 2008 cited in Rudincova, ‘Desiccation of Lake Chad as a Cause of Security Stability in the Sahel Region’.

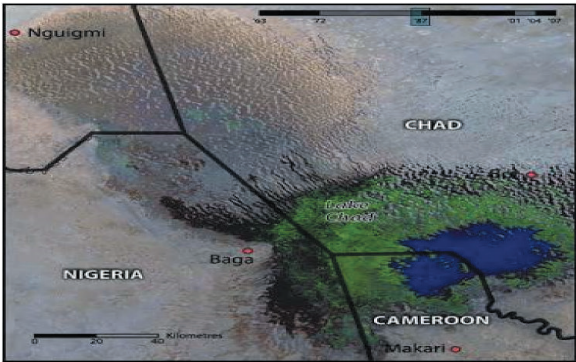


Figure 4. Present Condition of the Lake Chad Basin. Source: Odada, Oyebande, and Oguntola, ‘Experience and Lesson Learned Brief for Lake Chad’: 2.

LCBC in 1964. The commission was given three mandates: to sustainably and equitably manage the Lake Chad waterbody and other shared water resources in the Lake Chad Basin; to preserve the ecosystem of the Lake Chad conventional Basin; and to promote regional integration, peace, and security across the Basin. It was within the third mandate of the Commission that a regional military coalition known as Multinational Joint Security Force (MNJSF) was mooted in 1994, to combat the prevalence of armed banditry, trafficking in arm, human, and drugs, and other various organised cross-border crimes which occasioned palpable and profound insecurity in Chad

Basin.³ However, this regional force was largely docile and ineffective because of the strained relationship among the countries, especially between Nigeria and her Lake Chad neighbours.⁴ Consequently, the instability in the Lake Chad region has become more intense in the last few decades. New security threats such as terrorism and insurgency have added to the burgeoning security challenges plaguing the area.

Existing studies have documented some of the root causes and increasing effects of the recurrent unrest in the region.⁵ However, there still remains a critical question yet to be answered in scholarship in relation to the crises in the Lake Chad Region: What role does the increasingly deplorable ecosystem of the area play in the intense instability of the area? This question is the focus of this study. This study is organised in seven (7) different sections. Following from the introductory section above, the next section discusses the methodology of the study. This is followed by establishing theoretical linkage between environmental degradation, livelihood, and (in)stability. The fourth section engages the significance of the Lake Chad on the livelihood of the inhabitants of the Lake Chad Region. The fifth section discusses the factors responsible for the shrinking of the waterbody. The sixth section explores how the shrinking lake is fuelling instability of the region. The seventh section is the conclusion.

Methodology

A combination of primary and secondary data was collected and utilized for the study. Primary data were collected from interviews and observations. The fact that the authors are based in Yola and frequently travel around the North East region of Nigeria⁶ has enabled them to meet with key stakeholders, conduct interviews and participant and non-participant observations. Apart from the authors' activities and engagement in the North-East Nigeria, they have also participated in workshops, conferences, and seminars in Lake Chad area especially in Far North Region of Cameroon, Diffa Region in Niger and Lac Region in Chad. All these give the authors the opportunity to interview stakeholders as well as observe. Apart from rich data collected from the primary sources, the study also depended on secondary data obtained essentially from news and other published research.

Environment, livelihood, and (in)stability: understanding the linkage

There are at least three cogent perspectives to the linkage between the environment (natural resources) and instability. The first perspective holds that intense insurgency/terrorism and counterinsurgency/counterterrorism efforts put into curtailing them may have a significantly negative impact on

the environment and resources which could have contributed significantly to human wellbeing and development.⁷ In other words, activities of insurgent groups in using rural/forested areas as bases, hideouts, and fortresses, and government's militaristic counterinsurgency aimed at dealing with the insurgents can affect the ecosystem and therefore thwart the environment negatively. For instance, in some cases, the government often deforest forested areas serving as hideouts, bases, or fortresses for insurgency. This means that dealing with the insurgents can harm the environment significantly. The second perspective holds that unlawful exploitation of natural resources by insurgents or rebel groups can provide them with the financial advantage that will sustain their criminality and cause more instability.⁸ This has manifested in various armed conflicts in Burma, Cambodia, Liberia, and even in Nigeria where rebel or militant groups fought more to exploit natural resources than pursuing their insurgency with the state.⁹ In this situation, the environment is wrecked because of the uncoordinated exploration of the resources by the insurgent groups. The third perspective which is of prime importance to this study holds that environmental scarcity which may be occasioned by either man-made or natural reasons could precipitate violence conflict and promote instability by threatening the livelihood pattern of the people. The actual role of environmental degradation or scarcity in the precipitation of fragility or instability as projected in the third perspective is a subject of intense debate between the cornucopian and neo-Malthusian schools of thought. While the cornucopians acknowledged that environmental change has the potential to put human beings at risk but do not share in the pessimism that environmental change and resource scarcity will necessarily precipitate instability, fragility and violence,¹⁰ the neo-Malthusians claimed that environmental change poses a great threat to security because of the potential to increase resource scarcity.¹¹ The disagreement between the cornucopians and neo-Malthusians on the role of climate change and environmental degradation in the precipitation of fragility and instability is on the degree to which one can outrightly lay claim to environmental degradation as a major cause of instability and fragility and the extent to which human being will be able to respond. The two schools agreed that climate change and environmental degradation are real and it may result in scarcity. Unfortunately, environmental degradation and resource scarcity play role in many of the violent conflicts in the world today such as Rwandan genocide,¹² South African civil war,¹³ and even the Arab Spring of 2011.¹⁴ Ruttinger *et al.*¹⁵ identified seven compound climate change-fragility risks that may pose a serious threat to the stability of a region. First, as the pressure on natural resources mounts, competition can lead to instability and violent conflict in the absence of effective dispute resolution institution. Second, climate change can increase human insecurity of people who depend on natural resource for their livelihoods by pushing them to migrate or turn to more informal and illegal sources of income. Third, extreme weather conditions

and disaster may exacerbate fragility challenges and can increase people's vulnerability and grievance, especially in conflict-affected situations. Fourth, climate change is highly likely to disrupt food production, increase prices and market volatility, and heighten the risk of protest, rioting, and outbreak of civil conflicts. Fifth, trans-boundary water management can also be a frequent source of tensions. As demand grows and climate impacts affect availability and quality, competition over water use may likely increase. This may as well provoke pressure on existing governance structure. Six, rise in sea-level and coastal degradation can also threaten the viability of low-lying areas even before they are submerged, leading to social disruption, displacement, and migration. Furthermore, disagreement over maritime boundaries and ocean resources may increase. Lastly, as climate change increases, it may result in the making and implementation of adaptation and mitigation policies. These policies may have unintended negative effects, particularly in a fragile context. All these explanations show how scarcity induced by climate change and environmental degradation can precipitate instability and fragility. Most of these risks are closely linked to food, water, energy, natural resources, and ecosystem. They are therefore not isolated from each other and are affected by the same drivers and pressures such as climate change, increasing population and resource demand, mismanagement of resources, and environmental degradation. There are differences in terms of how the pressures interact and what kind or situation of fragility they can cause.¹⁶ However, it should be noted that 'soft' resources such as food, water, and land have more potentials to cause instability and fragility whenever they are in short supply or scarce much more than mineral resources. This is because the 'soft' resources are core to human existence and are means with which people sustain their living.

Chad Basin and livelihood in Lake Chad Region

Lake Chad is one of the largest lakes in Africa. It is located in the far west of Chad bordering North-East Nigeria. The basin lies between latitude 6° and 24° N and longitude 7° and 24° E. It straddles Nigeria, Chad, Niger, and Cameroon. The conventional basin area of the Lake Chad among the riparian states is shown in Table 2. The table shows that Chad poses the largest part of the water with 42%. This is followed by Niger with about 28% while Nigeria got 21%. The least is possessed by Cameroon which is 9%. The Lake Chad Basin is drained by numerous rivers which include the Chari-Logone, Komadugu-Gana or Lesser Yobe Ebeji, Ebeji Mbuli, Botha El Beed, the Yedseram, Ngadolu, Ngadda, Komadugu-Yobe, Taf-taf, and Serbewel. Only river Chari along with its tributary, the Logone, provides 90% of the inflow to the lake, while the remaining 10% comes from the Komadugu-Yobe river system. Three-quarters of the water entering the lake north of N'Djamena originate from headwaters in the Central African Republic and Cameroon.

Table 2. Distribution of Conventional Lake Chad Basin Area among the Riparian States.

S/N	Country	Distribution (in %)	Resident Population (in millions)
1	Cameroon	9	6
2	Chad	42	10
3	Nigeria	21	26
4	Niger	28	6

Source: Onuoha, Environmental Degradation, Livelihood and Conflicts: A Focus on the Implications of the Diminishing Water Resources on Lake Chad for North Eastern Nigeria; Magrin et al., Op. cit.

The origin of the waterbody is unknown but it is believed to be a remnant of a former inland sea which has grown and shrunk as a result of changes in climate over the past 13,000 years. It is an extremely shallow lake rarely more than 7 m deep. Around 4000 BCE when the water was considered to be at its largest size, it is estimated to cover an area of about 400,000 km².¹⁷ Then, the waterbody was known as Mega-Chad.¹⁸ From this size, the water has shrunk significantly. Around 1960s, it is believed that the water covered an area of about 26,000 km². By 1990s, the water shrunk to about 1350 km².¹⁹ Between 1994 and 2004, it shrunk drastically again; covering the paltry area of just about 532 km².²⁰ Thus, between 1963 and early 2000s, the lake is believed to have shrunk by over 90%.²¹

Freshwater is very vital to life because it sustains life. Unfortunately, freshwater is becoming increasingly scarce in many parts of the world, particularly in sub-Sahara Africa where approximately one-quarter of the population currently lives in water-stressed villages and communities.²² Meanwhile, the Lake which is located in the semi-arid region of the Sahara Desert is much more important because of the aridity of the environment and the enormous population depending on it for daily water needs. According to Science in Africa,²³ it provides freshwater and other resources to between 20 and 30 million people living in about 30 shore-line communities of Chad, Cameroon, Niger, and Nigeria. Apart from that, livestock and wildlife communities also benefit from the waterbody. The waterbody is the most important geographical feature of the basin, although a variety of other ecological zones surround the lake which includes deserts, forests, wetland, savannah, and mountains. The main economic livelihoods in the basin includes fishing, farming, hunting, and herding. Fishing is one major occupation around the lake and all the four riparian countries heavily depend on supplies from the lake.

It is believed that over 150,000 fishermen live on the lake shores and its islands. At the peak of its production in the 1960s, the Lake Chad fisheries were said to have included fish of close to 80 species with an estimated annual fish catch of 130,000 to 141,000 tons up to the early 1970s. According to Living Water's estimates, annual fish production are said to be close to that of 1977, ranging between 60,000 and 70,000 tonnes.²⁴ However, as a result of multiple factors, there have been considerable changes in the fish fauna.

These include high mortality, the disappearance of some open-water species, and the appearance of species adapted to swamp conditions in areas where they were previously unknown. The raising of cattle, sheep, and camels by local as well as nomadic herders provides additional means of economic livelihood in the basin. The lake which provides water and grazing lands for pastoralists and herders has been the traditional convergence point for the pastoralists: Tuareg, Toubou, Feda, Kanembu, Shuwa, Fulani, and Wadai from Chad, Niger, northern Cameroon, and northern Nigeria. Some people raise livestock, typically moving closer to the lake for grass in the dry season, then moving away in the rainy season when some graze their animals up to 100 km away.²⁵ After the droughts of the 1970s, many herders shifted from grazing animals like cattle and camels to browsing animals such as sheep and goats.²⁶

In addition to direct support to livelihoods, the lake serves as a veritable source of freshwater for drinking, sanitation, and irrigation. The lake provides the water and the agricultural springboard for the production of commodities such as cotton, groundnuts, sorghum, cassava, millet, rice, maize, and onions. As the freshwater and other resources of the lake continue to diminish, economic livelihoods have been significantly disrupted with a significant negative effect on the local populations relying on the lake for their survival.

Factors responsible for the diminution of the Lake Chad and its resource

Onuoha²⁷ identified three factors responsible for the desiccation of the Lake Chad and its resources. These are:

- (1) Climate Change
- (2) Unsustainable exploitation of the resources
- (3) Demographic pressure

Climate change

Climate change refers to any long-term alteration in the average weather either globally or regionally.²⁸ A major factor in the drying up of the Lake Chad waterbody is climate change. This dates back to many decades. There is a fluctuating balance in the water intake of the lake and its evaporation. Evapotranspiration of the water is estimated at 2,200 mm/annum²⁹ and because the water is shallow, it continually alters its shape and size. Furthermore, the climate of Lake Chad basin is characterized by its high temperatures, strong winds, spatially varied annual rainfall from nearly 1,400 mm along the southern pools to less than 150 mm near the northern

end.³⁰ Unfortunately, the variation in rainfall does not only affect the lake alone but also decreases the feeder rivers, which thus affects river inflows into the lake. For decades, the discharge from Chari/Logone river system at the city of N'Djamena in Chad decreased by 75% and this reduced inflow into the Lake Chad drastically.

Added to reduced rainfall is the problem of intermittent droughts. The region is known to have experienced intense drought back-to-back in 1970s and 1980s with serious negative effects on the lake and the major rivers that feed into the lake. The persistent intense droughts also led to the corrosive change in the ecosystem of the areas such as falling of groundwater tables, disappearance of some specific plant species, reduction in canopy cover, loss of wildlife population, and increase soil erosion and/or loss of fertility. A major cause of droughts is a drop in rainfall. Okpara *et al.*³¹ observed that from the middle of the 1960s, rainfall started to drop significantly leading to droughts of 1972–1975 which led to the shrinking of the water of the basin from its initial level of 25,000 km² in 1963 to 10,700 km². Another drought between 1982 and 1985 caused again by a drop in rainfall dropped the basin further to 1,410 km².

Unsustainable exploitation of water resources

Unsustainable exploitation of the water resources by the riparian states and the inhabitants of the area is another factor in the desiccation of the water-body. For a number of times, the riparian states – Nigeria, Niger, Chad, and Cameroon – have carried out major stream-flow modification and water diversion from the lake and its feeder rivers for largescale irrigation and water development projects in their respective countries. From 1970s till the present, large scale water diversion has been embarked upon by the riparian states especially along Chari/Logone River and River Kamadugu-Yobe. Most significant was the construction of both the Yaguou-Tekele dyke and the Maga dam by Cameroon in 1979, and a series of dams by Nigeria such as the Tiga Dam on River Yobe, the Alau Dam on River Ngadda, and the Yedersdam Dam on River Yedersdam along Kamadugu-Yobe River. Other examples of such projects include the South Chad Irrigation Project (SCIP) in Nigeria and the MAMDI Polder Project in the Republic of Chad.³² These competing demands for freshwater among the countries in the Lake Chad region, through the construction of massive irrigation projects, are responsible for about 30% of the decrease in the lake since 1960s. Between 1983 and 1994, the diversions of the water from the lake for irrigation and water development quadrupled. It accounted for about 50% of the additional decrease in the size of the lake while the flow of water from the primary feeder rivers also decreased significantly.³³ For instance, between 1970 and 1990, the average water discharge from Chari/Logone River to the basin was

55% of the period between 1950 and 1970.³⁴ It is also estimated that since 1980s, one-third of the water flow from Chari/Logone River is diverted before it reaches the Lake Chad.³⁵ Unfortunately, however, the drying up of the lake as a result of the irrigation has, in turn, affected the irrigation projects of the riparian states. A typical example of this is the dry up of the South Chad Irrigation Project (SCIP). According to the report of Onuoha,³⁶ SCIP was designed to irrigate 67,000 hectares but as the water level in the lake dropped in late 1980s, no irrigation could take place. The dried-up SCIP had a massive unintended effect on the livelihood of the people that the irrigation project was meant to improve. The dried-up canals were taken over by a rhizomatous plant known as *typha australis* which served as convenient habitation for large flocks of dreaded *Quelea* birds. These flocks of birds are responsible for regular loss of rice and other grain crops in the area, thus putting additional pressure on the fragile livelihood and ecosystem of the basin.

Demographic pressure

The third factor in the diminution of the Lake Chad is the demographic pressure of the area. This is due to a surge in the human and livestock population in the last few decades. Between 1960 and 1990, the number of people living around the lake increased from 13 million to 26 million. In 2007, the population of the inhabitant was roughly put at 37 million.³⁷ Although the current population of the area is not known, Sambo³⁸ predicted that the population of the area in 2025 would rise by 75%. Similarly, it is also likely that the humanitarian emergency caused by Boko Insurgency may have affected this prediction; the population at the moment may not be less than 46 million.

Furthermore, an increasing number of the inhabitants in the area has necessitated the raising of an increased number of livestock to feed the teeming population in the area. The presence of the waterbody itself often considered by the local people as the 'miracle of the Sahel' because of the strategic significance of providing water in the desert where aridity is high usually attracts more herdsman from far and wide. The combined effect of this increasing human and livestock population in the area is that it has led to accelerated exploitation of the Lake Chad water resources by the local inhabitants. Other environmental consequences are overgrazing, unhealthy agricultural practices, and intense fishing to take care of the feeding of the growing population of the area. The effect of this on the waterbody is enormous. The capacity of the water to replenish itself is destroyed as a result of overuse beyond its carrying capacity. The current state of the lake is one of the acute water shortage. Reduced water levels have caused increased alkalinity, increased anoxic conditions and worsened the effects of eutrophication. The resultant effects are numerous: water scarcity/insecurity, falling

Table 3. Poverty Profile of Lake Chad Basin Countries.

LCB Country	Population as at 2019	No. of people living in extreme poverty ^a	People living in extreme poverty as a percentage of the population	Categorisation of improvement over time
Chad	14,299,697	5,414,842	37.9%	Poverty Rising
Niger	21,349,169	13,661,070	64.0%	Poverty Rising
Cameroon	23,385,959	4,856,271	20.8%	Poverty Rising
Nigeria	198,370,189	94,583,286	47.7%	Poverty Rising

Source: Owonikoko, 'Beyond Boko Haram Insurgency: Rethinking Regional Response to Security Stability in Lake Chad Region', 12.

aExtreme poverty is defined using the World Bank's definition as living on 1.25 USD or less per day.

health standard, food insecurity, and worsening of myriad socio-economic and livelihood challenges in the area especially widespread poverty among the people.

One of the major socio-economic challenges in the area is increasing poverty. The Lake Chad Basin countries are among the richest countries in mineral resources all over the world, yet they constitute part of the poorest in the world. Countries of the region have the highest number of people living in extreme poverty all over the world. As Table 3 shows, 37.9% of Chadians are living in extreme poverty. In Niger, 64% of the population is extremely poor while 20.8% of Cameroonians are poor. Although 47.7% of Nigerians are poor, this covers over 90 million people. Nigeria is thus 'poverty headquarters of the world' since 2018 because it has the highest number of people living in poverty.

Although poverty, especially among the young age structure, is high in these countries, areas at the peripheries of the countries such as North East region of Nigeria, Far North Region of Cameroon, Diffa Region of Niger and Lac Province of Chad which are areas bordering the Lake Chad are most affected. Ninety per cent of the inhabitants are unemployed and living in poverty³⁹ which is more than the national average of the countries of the region. This is because the means of livelihood of the people – fishing, agriculture, hunting, and pastoralism – which have been sustained by the Lake Chad have been precariously affected. The next sub-theme in this study focuses on how this condition enhances or contributes to the fragility and security instability of the region.

Diminutive Lake Chad resources and instability in the region

The diminution of the Lake Chad water and its resources lead to loss of livelihoods and rising poverty in the area. How does this contribute to rising instability in the area? There are at least four ways in which this is a contribution to the fragility and instability of the Lake Chad Region. Firstly, people who have lost their means of livelihood such as fishing, farming, and pastoralism, to the desiccation of the waterbody have taken into criminality for

survival. Some of the criminal activities ventured into are cattle rustling, kidnapping, trafficking in drugs, human, and arms, ritualism, and so on. The flexibility of border crossing around the area made it very easy to commit crimes around the area in one country and quickly move to another country to evade arrest. One of the major criminal activities usually embarked on in the area is cattle rustling. This dimension of criminality has become a reoccurring security dilemma in the area. Although lack of statistical documentation of cattle rustling figures generally mars the understanding of the magnitude of incidents of cattle rustling in Lake Chad, some reports provide clues to the nature of the criminality in the periphery of the Lake Chad countries bordering the lake. In January 2016, the Chairman of Miyetti Allah Cattle Breeders Association of Nigeria (MACBAN) in Borno State estimated that 200,000 heads of cattle were stolen in Borno State alone in 2015.⁴⁰ As Table 4 also indicates, several other cases of rustling are taking place across the Lake Chad Basin. Although these large-scale cattle rustling incidents were linked to Boko Haram, the complex web of activities involved in rustling-sale chains shows that Boko Haram could not have continued with the activity if local inhabitants are not providing support.

The cattle rustling-sale chains in Lake Chad Basin need to be understood. It is a complex web of exchange relation that involves insurgents and host of other middlemen. Boko Haram insurgents rustle cattle from the hinterlands, usually from other Lake Chad countries. Because they cannot access the local cattle markets which are mostly in the cities, they hire agents who get the

Table 4. Some incidents of Cattle Rustling in Lake Chad and Financial Worth.

S/ N	Description of rustled Cattle	Financial Worth
Cameroon		
1	On 9 September 2014, 7 000 cows from Chad going to Maiduguri were rustled by BH around Dikwa in Nigeria.	Based on estimates of the minimum value of cattle (EUR500), the minimum value of the 24 755 cattle stolen by BH in these three instances was approximately EUR 12 377 500 or CFA 8 107 262 500.
2	On 14 January 2016, BH stole 4 244 cows from 25 Choa Arab owners in Hilé Alifa, Fotokol and Makary, in the north of Cameroon	
3	On 12 April 2016, BH stole 13 511 cows in the Kolofota Subdivision of Cameroon.	
Nigeria		
1	In July 2016, BH members rustled 20 000 cattle from a village in Maiduguri. The cows were transported to a market in Jigawa State through the Republic of Niger.	Each cow estimated at NGN 150 000 or 500 USD. Thus, 20 000 rustled cow estimated at NGN 3 billion or 10 USD million.
2	In an operation, CJTF found 1 300 bags of cow skins. The cows were stolen from the Lake Chad basin, slaughtered and processed into dry meat and transported to a market in Yobe State for sale in the southern part of Nigeria.	A sack of dry meat costs approximately NGN 150 000, which brought the total estimated value of the dry meat to NGN 195 000 000 or 650 USD 000.

Source: FATF-GIABA-GABAC, 'Terrorist Financing in West and Central Africa', 12–13.

cattle to the markets for sale through the arcane medium of transaction. They sell the cattle very cheap and declare even less than is sold to Boko Haram members. For instance, stolen cow sent by Boko Haram members from the hinterland which is worth over 250,000 naira (\$694 at 360 naira per dollar exchange rate) may be sold for less than 50, 000 naira (\$139) but only 25,000 naira (\$69) may be declared for Boko Haram members. However, the money does not go back in cash, they are used in the purchase of food, fuel, and other needed materials to forge ahead in their insurgency. Although Obaji⁴¹ pointed at the Nigerian security agents like soldiers and police and members of the Civilian Joint Task Force as serving as middlemen for the insurgents to assist them to sell their rustled cow in Maiduguri market, the victims of environmental degradation especially the shrinking Lake Chad and land desertification in northeastern Nigeria are also heavily involved. For instance, on 23 March 2020, the Nigerian Army arrested eight Boko Haram logistics suppliers with six vehicles loaded with food items, fuel, vehicle spare parts, and mattresses to be taken to Boko Haram members in Sambisa and Lake Chad axis.⁴² Although there is no proof that money for the purchase of the items was gotten from sales of rustled cattle in the chain explained above, one interview with an army officer in Maiduguri indicates that some of the apprehended suppliers were inhabitants of Lake Chad area whose means of livelihoods have been lost to land desertification.⁴³

Secondly, insurgent groups in the region especially Boko Haram and ISWAP have taken advantage of the socio-economic conditions caused by the shrinking Lake Chad – loss of livelihood and rising poverty – to recruit more men in order to enhance their insurgency in the region. It is important to understand the trajectory of Boko Haram recruitment since its earliest stage to be able to understand and appreciate manipulation of the socio-economic conditions of the people. Boko Haram began its campaign by radicalising and recruiting new members through preaching.⁴⁴ However, this narrative has changed. The group and its breakaway faction, ISWAP, are effectively leveraging on the growing poverty caused by the shrinking Lake Chad Basin to recruit at the border communities. There are at least three basic approaches usually employed by the insurgents in taking advantage of this group of people. In some cases, Boko Haram simply employs narratives that speak to the grievance or the poor economic conditions of the people to lure people into joining the insurgent group. For instance, in Nigeria, the northeast part of the Lake Chad is the region's most vulnerable to climate change. Since the 1970s, the number of rainy days in northeastern Nigeria has reduced by 53% causing southward desertification of land by 1–10 km per year.⁴⁵ This has reduced the available arable farm significantly and caused severe economic downturn especially among the youth population in the area.⁴⁶ Boko Haram utilised its salafi jihadist ideology framed around issues that appealed to the grievance of the people to

recruit young impressionable youths to join it ranks.⁴⁷ This essentially played out in Michika and Madagali Local Government Areas of Adamawa State where some youths, who were denied land for farming partly as a result of desertification leading to the shortage of arable farming, displayed anger against the traditional authorities in the areas for what they considered as injustice perpetrated against them by their communities. Boko Haram manipulated the grievance of the aggrieved youths to solicit the supports of the youths; many of whom found solace in Boko Haram occupation of their areas and provided assistance to the group in terms of intelligence information to be able to successfully occupy the area. This is also the case in the Cameroon side of the Lake Chad. Boko Haram appealed to the poor economic conditions of the people to lure them into joining the group. Moustapha Alidu, a resident of the area who witnessed the deployment of the antics of Boko Haram in the border community of Kolofata in Far North region of Cameroon explained how Boko Haram insurgents employ the narratives that speak to the poor economic conditions of the people to lure them into joining the group thus:

This is also the case in the Cameroon side of the Lake Chad. Boko Haram appealed to the poor economic conditions of the people to lure them into joining the group.⁴⁸

Sometimes, the leverage may be utilised in the form of blatant deployment of economic incentives as baits to recruit new members. This may be deployed indirectly or directly. Indirectly, economic incentive can be given in form of non-interest loan by the insurgent group to the unsuspecting public basically to buy their minds into supporting their causes by providing essential service to the insurgents which may include spying, provision of intelligence information especially about areas they want to attack or about presence, capacity, and vulnerability of security personnel in an area to the insurgents. This was reported to have been utilised by Boko Haram in the occupation of Gombi town in Gombi Local Government area of Adamawa State.⁴⁹ Direct deployment of economic incentive involves giving financial reward to recruits or render services that will support the course of the campaign of the group with the understanding of the economic conditions of the people such that the people make a living by rendering services to the insurgents. In this case, they do not necessarily have to be a member of the group. The situation of the cattle rustling-sale chains (discussed earlier) fits well into this narrative. Similarly, one of the Boko Haram recruit in Diffa Region of Nigeria explained how Boko Haram gratifies those who excellently perform their assigned duties diligently with financial incentive thus:

"If they tell you to set off a bomb and it succeeds, if it kills a lot of people, they will pay you a lot of money".⁵⁰

Furthermore, the use of farmers, herders, hunters, and fishermen affected by drought and desertification in the Diffa Region of Niger as fighters, for espionage and intelligence gathering is also another example. According to the report, each recruit was paid 500,000 Naira (approximately 3,085, USD £1,835). Although they did not support Boko Haram's reason for fighting (which is the establishment of Islamic caliphate), they joined or worked for the group because of the money involved.⁵¹ To them, therefore, working for the group is earning a living and nothing more. Similarly, in Far North Region of Cameroon, Boko Haram also recruited people affected by the shrinking Lake Chad water, giving them motorbikes and bonuses ranging from 300 to 2000 US\$ with salaries of between 100 and 400 US\$.⁵²

Another popular antic usually used by Boko Haram in recruiting those affected by shrinking Lake Chad Basin is an eclectic approach involving wide-range of methods deployed simultaneously. In this regard, persuasion to join insurgent group, using the economic condition of the people and deployment of economic incentives as bait and even force (in the event that the people refuse) are sometimes combined. The explanation of Youssuf about how Boko Haram recruits young people into the group in some part of Cameroon aptly explains this. According to Youssuf's explanation,

A few days ago (referring to June 2015), Boko Haram militiamen came to our village, which is ten kilometers from Bourrah, and they told us to stop wasting our lives here and join them in the holy battle to save our faith and the lives of our families. They also said that Boko Haram is young people's only future ... [They] also told us that we would get paid from 600 USD to 800 USD a month if we joined them. It is a lot of money to us, if you consider that we cannot even make 70 USD a month from our work ... I was scared and I declined their offer, but many of my friends accepted.⁵³

Boko Haram fed into the condition created by climate change and environmental degradation in some of the communities to perpetrate their insurgency. Recruitment of members from the pool of poor people around the Lake Chad is a significant factor in the resilience of Boko Haram since 2009. Although Boko Haram seems to have been incapacitated by military engagement, the threat it poses to the lake Chad region remains intense. Lake Chad remains a Boko Haram stronghold and it continues to manipulate the deplorable situation of the environment to her advantage as it has cultivated stronger ties with the local residence.

Thirdly, one of the outcomes of environmental degradation in the area is that it has intensified long-distance migration of the people away from the Lake Chad into cities and towns as a form of coping mechanism. There are two patterns of migration discernible. The first pattern involves migration of victims of environmental degradation from Lake Chad to major towns and cities in search of menial jobs which can sustain their livelihood. Unfortunately, however, economic decadence in urban centres and unskilled

nature of the manpower they possess means that only a few of them can find job while a large number of them remain unemployed. The large unemployed migrants from the Lake Chad add significantly to the urban social crises such as the increase in crimes and violence. Nigeria's major cities in the north and south have experienced increased insecurity recently which includes banditry, kidnapping, cattle rustling and so on. Members of the public have also expressed belief that the perpetrators of these crimes are migrants from the Lake Chad areas. Security personnel interviewed also shared a similar view, saying:

Many of those involving in kidnapping, burglary, theft and other criminal activities in Nigerian cities are people who have been dislodged by violence in their rural communities. Some are dislodge by environmental issues in the Lake Chad Area. They thought that going to the city will improve their lots but getting to the city, they discovered that life is not as easy in the city as it seems to them. Going back to their areas is difficult because what drove them out is still there. Involvement in criminality in cities is usually coping mechanism for excruciating challenges they face with regard to sustaining their living in cities⁵⁴

A major pointer to this fact is that some of the apprehended criminals could neither speak English nor local dialects in Nigeria. They are inhabitants of the Lake Chad Basin areas to the side of Cameroon, Niger, or Chad whose livelihoods have been battered by desiccation of the Lake Chad. The second pattern of migration involves long-distance migration of pastoralists and their livestock in search of better grazing opportunities for their livestock as a result of the inability of the Lake Chad to support their grazing demands. In most case, the preferred destination is Nigeria.⁵⁵ Migration of pastoralists down south in search of pasture is not new. It used to be seasonal migration usually between December and May. By December when the rain has completely stopped in the north and the vegetation has become dried, pastoralists moved further south where better grazing opportunities may be found for their livestock. When the rains begin around May they move back northward. But, the harsh environmental trends in the northern part of Nigeria, such as the shrinkage of Lake Chad and land desertification, have made the seasonal movement of the pastoralists to the southern part of Nigeria more permanent. Rather than migrating back to the north, many of the pastoralists are eventually settled down in the south. The resultant effect of this is the frequent outbreak of resource conflict especially between farmers and herds-men in places not known to have recorded outbreak of this conflict previously such as middle belt, south-west, south-south and south-east geopolitical zones of Nigeria. This conflict has been quite intense, leading to the sacking of communities in most cases. Between January 2016 and October 2018, 3641 people were killed in farmer-pastoralist conflicts in 21 states and Federal Capital Territory of Nigeria.⁵⁶ States affected in Nigeria were Benue, Adamawa, Plateau, Taraba, Kaduna, Nasarrawa, Niger, Kogi, Sokoto, Enugu,

Delta, Cross River, Oyo, Edo, Ebonyi, Rivers, Ondo, Anambra, Abia, Ekiti, and Abuja.

Lastly, another major impact of the environmental degradation of the Lake Chad on the instability of the region is that use and management of the water resources from the Basin have resulted in disagreements. The disagreement is in two folds – between the users and among the riparian states. The shrinking of the Lake Chad often necessitates adjustment of the people to enhance their access to the shoreline of the water. As Figures 3 and 4 show, the shrinkage of the Lake has made the water drift to the side of Chad and Cameroon while Nigerian and Nigerien sides are dried up. Thus, with the contraction of the Lake, cross-border movement of the people to catch-up with the shoreline of the lake is intensified. Apart from frequent contact that is intensified among different people who depend on the water to sustain their living which makes them competitive in their interrelation and therefore sows the seed of conflict, Nigerians and Nigeriens users of the Lake will cross international boundaries to access the water. This has caused an outbreak of complex web of social, economic, environmental, and political issues, threatening to spill into interstate conflicts in the Lake Chad. For instance, in 1992 there were clashes between upstream (Nigeria) and downstream (Niger) communities over access to water from the Tiga and Challawa Gorge dam at the southwest end of the Lake Chad.⁵⁷ In 2007, there was an outbreak of conflict between Nigerian fishermen and Cameroon and Chadian gendarme which almost led to the confrontation between Nigeria and Chad/Cameroon.⁵⁸ Personnel of the Nigerian Army, talking about how Chadians users have become very protective of the water, said to the Chadian users of the Lake Chad thus:

Chadians always deprive us of the use of the water. Because the lake is called Lake Chad, they think that it belongs to them alone. They prevent every other people who are not Chadians from accessing the water.⁵⁹

The comment above typifies conflict between the users of the water across the riparian states, another version of the conflict over use and management of the lake among the riparian states. In the late 1980s, Nigeria and Niger Republic clashed over water diversion and access to Komadugu-Yobe River flow within the Lake Chad Basin. Similarly, Nigeria and Cameroon have clashed over the ownership of Bakassi Peninsula and Lake Chad region since the early 1980s. The Bakassi peninsula was part of Nigeria but Cameroon contested its ownership with Nigeria, leading to some military encounters between the two countries, as a result of which several lives were lost.⁶⁰ In 1994, Cameroon approached the International Court of Justice (ICJ) with the plea of taking over the ownership of the oil-rich peninsula and some islands in Lake Chad; to which Nigeria refused to surrender. These conflict relationships among the countries of the region have seriously affected the

ability of the countries to plan and effectively execute a regional collective action to fight insurgency in the Lake Chad. For instance, while Cameroon was in a conflict with Nigeria over Bakassi Peninsula, she refused to contribute troops to the MNSJF created to address banditry in Lake Chad in 1990s.⁶¹ Similarly, because of the conflict relation between Nigeria and the rest of her Lake Chad neighbours, the early signs of the threat of Boko Haram were ignored by Nigeria's Lake Chad neighbours. Boko Haram used Nigeria's Lake Chad neighbours' territories to stockpile weapons, and as training camps, and transit points for weapons especially those gotten from Maghreb region during the Libyan Civil war which began in 2011. Furthermore, Boko Haram also used their territories to plan and execute attacks against Nigeria without any response from the Nigeria's Lake Chad neighbours.⁶² Following the crackdown on Boko Haram after their July 2009 uprising in Maiduguri and the killing of Yusuf Mohammed, the leader of Boko Haram, prominent leaders of the group relocated to neighbouring Lake Chad countries to seek refuge among the local population. Boko Haram was basically seen as Nigeria's problem even when their territories were used by the insurgents to attack Nigeria.

The loud silence of Nigeria's Lake Chad neighbours has enabled Boko Haram to heighten its attacks and then disappear across borders to evade Nigeria's military. The continuous attack of Boko Haram and the use of Nigeria's Lake Chad neighbour territories as hiding places triggered humanitarian crisis while many Nigerian youths in Borno, Yobe, and Adamawa States have formed local resistance groups to fight Boko Haram. The effect of this is that it has made it difficult for Boko Haram to effectively recruit within the Nigerian state. Thus, the group has shifted its focus for recruitment to Nigeria's Lake Chad neighbours.

Given the perception of Boko Haram as a common enemy to the security community of Lake Chad region, and the reinvigoration of the MNJTF to address the crisis, one would have thought that Nigeria and her neighbours have learnt lessons to forge a common course against any security threat. Unfortunately, this has not happened. Rather, the conflict relationship between Nigeria and her Lake Chad neighbours keeps coming up. A new manifestation of this is how the countries have carried on with the operations of the MNJTF. Optimal operation of the force has been minimal because of the transfer of conflict relationship among these countries into the force. In fact, it often runs more as a bilateral rather than multilateral force that it was created to be. This is why the multinational joint force was referred to as a 'political prop rather than an integrated military outfit'.⁶³ Each national military pursues her campaign while the force only serves political purpose. Joint efforts are rare among the multinational troops. Where this has happened, it was another military agreement within the multinational force. For instance, Chadian troops were allowed into Cameroon and Nigeria only

within the framework of a separate bilateral agreement with the two countries and not within the multinational force.⁶⁴ Similarly, Niger requested for bilateral assistance from Chad after Boko Haram attacked Bosso. On several occasions, troops of any of the nation-state of LCBC contributing troops to the MNJTF have had to turn back from running after fleeing insurgents whenever they cross the border into a member's territory simply because they are not authorised to enter into the country. The escape often provides the insurgent with respite to fortify themselves, re-strategise and attack. This has inhibited the much-needed military victory against the insurgents.

The unfriendly relationship between Nigeria and her Lake Chad neighbour came up again recently when Nigeria was criticised by allied states in the fight against Boko Haram as parading coward troops and allegedly reluctant to allow foreign soldiers into the country to fight Boko Haram. Nigeria too has also pointed at the complicity of her Lake Chad neighbours in aiding Boko Haram attacks against Nigeria. There was a trade of words between Nigerien Minister for Defence, Mahamadou Karidjo and the spokesperson of the Nigerian Army, General Chris Olukolade. Mr Mahamadou Karidjo tagged Nigeria soldiers as 'cowards' and this was replied by General Chris Olukolade with tweets alleging that Niger is conniving with Boko Haram to ruin Nigeria by supplying mercenaries to the terrorists 'as a way of surviving the poverty in their country'⁶⁵

The Cameroonian authorities also accused Nigerian troops of fleeing from Boko Haram attacks into Cameroon.⁶⁶ Technically, he referred to Nigerian soldiers as cowards. Cameroon was also unhappy with Nigeria for preventing its soldiers from pursuing fleeing Boko Haram members into Nigeria. This division among the Multinational Joint Task Force reinvigorated since 2015 to curtail insurgency and terrorism in Chad Basin contributing states is a major reason the troop has achieved limited victory against Boko Haram and ISWAP.

Conclusion

Insurgency from armed non-state groups such as Boko Haram and ISWAP and criminal activities in Lake Chad region has been significantly imbued by socio-economic conditions created by the shrinking Lake Chad. As it has been explained in this study, the shrinking Lake affected the livelihoods of the inhabitants which are anchored on fishing, farming, hunting, and herding. Loss of livelihood created the enabling environment for instability in the area. While some affected inhabitants take into crimes and some are recruited by insurgents to swell their ranks, others especially the pastoralists migrated southward into cities in search of better grazing opportunities. The massive influx of pastoralists and farmers into cities led to a massive surge in crime in urban centres. It is also a major cause of farmer-pastoralist conflicts in Nigeria.

From the details provided in this study, environmental degradation acted with other factors to trigger or enhance the instability of the Lake Chad. This suggests that any sustainable solution for tackling the instability of Lake Chad cannot be attained if the problem of the shrinking lake is not addressed. It is remarkable that the states of the region have demonstrated their readiness to addressing the environmental degradation of the Lake Chad Basin region, through the establishment of LCBC. However, they have not collectively worked the talk. Efforts have not been directed at addressing or resuscitating this waterbody. Their efforts rather are mostly centred on military approach which is yet to be successful in ensuring the stability of the region. There is, therefore, the need for collaborative efforts of the riparian states to address the shrink Lake Chad. Lack of attention on the shrinking river even as the population continue to surge in the Lake Chad may spell a greater doom on the region in the nearest future.

Notes

1. Geraud and Marc-Antoine, "Crisis and Development: The Lake Chad Region and Boko Haram".
2. An inter-governmental organisation known as Lake Chad Basin Commission (LCBC) was established by the leaders of Nigeria (Tafawa Balewa), Cameroon (Ahadou Ahidjo), Chad (N'garta Tombalbaye), and Niger (Hamani Diori) on 22 May 1964.
3. Owonikoko, "Multinational Joint Task Force: A Critical Reflection on Regional Coalition for Counterterrorism Against Boko Haram in the Lake Chad Basin".
4. Albert, "Rethinking the functionality of the Multinational Joint Task Force in Managing the Boko Haram Crisis in the Lake Chad Basin"; Owonikoko, Ibid; Assanvo, Abatan, and Aristide, "Assessing the Multinational Joint Task Force Against Boko Haram".
5. Edgar, "ECOWAS Protocol on Transhumance and Migration: Implications on Cattle Rustling in the Chad Area"; Geraud and Marc-Antoine, "Crisis and Development: The Lake Chad Region and Boko Haram".
6. North East region of Nigeria is composed of six states – Adamawa, Yobe, Gombe, Borno, Taraba, and Bauchi. Out of these states, four – Adamawa, Borno, Taraba, and Yobe – are grouped as part of the Lake Chad Region because they share international borders with Niger, Chad, and/or Cameroon.
7. Federick and Rohner, "War and Natural Resource Exploitation".
8. See Collier and Hoeffler, "Greed and Grievance in Civil War"; Collier and Hoeffler, "On Economic Consequences of Civil War"; Fearon and Laitin, "Ethnicity, Insurgency and Civil War"; Le Billon, "The Political Ecology of War: Natural Resources and Armed Conflicts"; and Ross, "What Do We Know about Natural Resources and Civil War?".
9. Albert, "Beyond Nigeria's Sambisa: Forests, Insurgency and Counterinsurgency in Africa"; and Owonikoko, "An Assessment of Government Engagement with Armed Groups in the Niger Delta Region".
10. They are also of the view that even if the environment changes and exacerbates resource scarcity human beings have the capacity to adapt and adjust to

resource scarcities and its negative consequences. See Simon, "The Ultimate Resources II" and Lomborg, "The Skeptical Environmentalists".

11. Bernauer and Vally, "Environmental Changes and Violent Conflict".
12. Percival and Homer-Dixon, "Environmental Scarcity and Violent Conflict"; McNab and Mohamed, "Human Capital, Natural Resource Scarcity and the Rwandan Genocide".
13. Percival and Homer-Dixon, "Environmental Scarcity and Violent Conflict: The Case of South Africa".
14. Aled, "Food security: How drought and rising prices led to conflict in Syria"; Baragona, "2011 Food Price Spike helped trigger Arab Spring, Researchers say"; and Harrigan, "Did food prices plant the seed of Arab Spring?".
15. Rüttinger, Stang, Smith, Tanzler and Vivekananda. "A New Climate for Peace – Taking Action on Climate and Fragility Risks".
16. Nett and Rüttinger, "Insurgency, Terrorism and Organised Crime in a Warming Climate: Analysing the Links Between Climate Change and Non-State Armed Group".
17. Onuoha, "Environmental Degradation, Livelihood and Conflicts: A Focus on the Implications of the Diminishing Water Resources on Lake Chad for North Eastern Nigeria"; Okpara, Stringer, Dougil and Bila, "Conflict about water in Lake Chad: Are Environmental Vulnerability and Security Issues Linked?".
18. Drake and Bristow, "Shorelines in the Sahara: Geomorphological evidence for an enhanced monsoon from palaeolake Megachad".
19. Grove, "African river discharges, and lake levels in the twentieth century"; Coe and Foley, "Human and Natural Impacts on the Water Resources of the Lake Chad Basin".
20. Onuoha, Op. cit: 43.
21. Masari, 2006 cited in Onuoha, Op. cit: 43.
22. Freitas, "Water as a stress factor in sub-Saharan Africa".
23. Science in Africa, "Replenishing Lake Chad".
24. Living water cited in Onuoha, Op. cit.
25. Onuoha, Op. cit.
26. Schneider in Onuoha, Op. cit: 46.
27. Onuoha, Op. cit: 46–50; See also Onuoha, "Climate change, population surge and resource overuse in the Lake Chad area", 26–30.
28. Papas, "What is Climate Change and how it is affecting Earth?".
29. Okpara et al., Op. cit, 313.
30. Odada, Oyebande and Oguntola, "Experience and Lessons Brief for Lake Chad".
31. Okpara et al., Op. cit: 313.
32. Onuoha, "Environmental Degradation, Livelihood and Conflicts"; Okpara et al., Op. cit; United States Geological Survey, 'Lake Chad, West Africa'.
33. Coe and Foley, Op. cit; Onuoha, "Environmental Degradation, Livelihood and Conflicts".
34. Olivry et al., "Hydrology of the Lake Chad Basin".
35. Glantz, "Lake Chad and the Aral Sea: A sad tale of two lakes".
36. Onuoha, "Environmental Degradation, Livelihood and Conflicts", 48.
37. United Nations Environmental Protection, "Global environment outlook"; United Nations Educational, Scientific and Cultural Organisation, "Water Portal Weekly Update".
38. Sambo, *Introductory Remark*, 2.

39. Kindzeka, "Cameroon fight Boko Haram Recruitment with goats, sheep". Para 10.
40. Ciara and Omar, "Organised Crime in Africa/Cattle Rustling on the Rise in Africa," Para 8.
41. Obaji, "How Boko Haram Makes its Cash from Stolen Cattle".
42. Okoye, "Army Arrests Boko Haram Logistics Supplier Burnt 6 Vehicle," Para 1–2.
43. Nigerian Army contingent in Operation Lafiya Dole, phone interview conducted on 27 March 2020.
44. For an extensive discussion of how Boko Haram used preaching in radicalising and recruiting new members, see Mohammed, "Message and Methods of Boko Haram".
45. Odjugo Peter, cited in Nett and Rüttinger, 12.
46. See Onuoha, "Why do youth join Boko Haram?"; See also CLEEN Foundation, "Youth, Radicalisation and Affiliation with Insurgent Groups in Northern Nigeria".
47. Sampson, "The dilemma of Counter-bokoharamism".
48. Cited in the New Humanitarian, "No shortage of recruitments for Boko Haram in Cameroon's Far North," Para 10.
49. Interview with persons displaced by Boko Haram insurgency at Malkoi Camp, Yola, Adamawa State, 2018.
50. Obe, "Environmental Degradation, Climate Change and Conflict," Para 19.
51. Fessy, "Niger hit by Nigeria's Boko Haram," Fall. BBC News, Diffa, Niger.
52. Owonikoko, "Multinational Joint Task Force", Op. cit. 292.
53. Southworld, "Report-Boko Haram Recruit Young People from Cameroon," Para 1.
54. Police officer, 44, interviewed on 20 November, 2019, at Yola, Adamawa State.
55. Some have linked the influx of herdsmen from Lake Chad, some of whom are Fulani, to the emergence of Muhammadu Buhari, who is also a Fulani, as the president of Nigeria. The fact, however, remains that herdsmen's influx into Nigeria predates his presidency. Although there appears to be an intensification of their influx into Nigeria in recent years, further degradation of the environment in the Lake Chad area may have also contributed to it.
56. Amnesty International, 'Harvest of Death: Three Years of Bloody Clashes between Farmers and Herders in Nigeria'.
57. Odada et al., Op. cit.
58. Murray, "Lake Chad fishermen pack up their nets"; see also Onuoha, "Climate change, population surge and resource overuse in the Lake Chad area".
59. Personal interaction with the lead author on 19 May 2019.
60. Albert, "Rethinking the Functionality of the Multinational Joint Task Force in Managing the Boko Haram Crisis in the Lake Chad Basin".
61. Théroux-Bénoni, "Without Buy-in from Nigeria on the Military Response and Beyond, No Lasting Solution to the Boko Haram Problem is Possible".
62. Mohammed, Momodu, and Owonikoko, "Multinational Joint Task Force and Countering Boko Haram Terrorism in the Lake Chad Basin: Problems and Prospects", 53.
63. Thurston, "West Africa Regional Force Against Boko Haram is a Political Problem".
64. Interview with Nigerian Army Contingent in MNJTF, May 2018.
65. See Ekhatior, "Nigerian Military Accuses Niger's Defence Ministry of Aiding Boko Haram".

66. Salkida, "Why Troops are losing Ground to ISWAP".

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Notes on contributors

Saheed Babajide Owonikoko is a lecturer and researcher at the Centre for Peace and Security Studies, Modibbo Adama University of Technology, Yola, Adamawa State. His area of research interest is the Management of armed groups. He has published widely in revered journals both locally and internationally.

Jude A. Momodu is an associate professor at the Centre for Peace and Security Studies of the Modibbo Adama University of Technology, Yola. He is also the post-graduate programme coordinator of the Centre. He has published widely in local and international journals.

ORCID

Saheed Babajide Owonikoko  <http://orcid.org/0000-0002-6771-0811>

Notes on contributors

Saheed Babajide Owonikoko is a lecturer and researcher at the Centre for Peace and Security Studies, Modibbo Adama University of Technology, Yola, Adamawa State. His area of research interest is the Management of armed groups. He has published widely in revered journals both locally and internationally.

Jude A. Momodu is an associate professor at the Centre for Peace and Security Studies of the Modibbo Adama University of Technology, Yola. He is also the post-graduate programme coordinator of the Centre. He has published widely in local and international journals.

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