



AFRICA PROGRAM OCCASIONAL PAPER

Climate Change and Violent Extremism in the Lake Chad Basin: Key Issues and Way Forward

By Osei Baffour Frimpong
July 2020

Climate change is increasingly threatening state stability and human security across most developing countries. While there is no mono-causal link between climate change and conflict, the impact of environmental change and population displacement cannot be underestimated.¹ In the global security context, climate change is better understood as a “threat multiplier” that interacts with and compounds existing risks and vulnerabilities to cause conflict.² A nodal example is the case of the Lake Chad Basin region, where riparian communities in four countries—Cameroon, Chad, Niger, and Nigeria—have been confronted with an unprecedented security crisis driven by persistent terrorist and violent extremist attacks, as well as ethnic, religious, and farmer-herder conflicts. This has led to internal displacement of people, refugee flows, and an influx of small arms and light weapons (SALW). This security crisis is compounded by climate change and the attendant diminishing of resources in the lake, which has long been the source of economic livelihood for the millions of people who inhabit the catchment areas.³ The impact of this is evidenced in the form of depleted ecosystems, water shortages, crop failures, livestock deaths, collapsed fisheries, soil infertility, food insecurity, and, as a result, increased poverty.⁴

Over time, these vulnerabilities have intersected with terrorism and violent extremism that is being spread across the region by Boko Haram and the Islamic State in West Africa Province (ISWAP). While the humanitarian crisis caused by violent extremism in the Lake Chad Basin has gained considerable attention in the policymaking and academic worlds, much less attention has been paid to how the correlation among climate

change, diminishing lake resources, and violent extremism heightens insecurity in the region.

In light of this, this paper focuses on the impact of climate change on diminishing resources, its relationship with violent extremism and terrorism in the Lake Chad Basin, and how this relationship exacerbates insecurity in the region.

Framing the Issues

Lake Chad is one of Africa's largest lakes, supporting the livelihoods of over 30 million people in Cameroon, Chad, Niger, and Nigeria.⁵ For centuries, the lake has supported agricultural production and has been a lifeline for fishing, crop farming, and livestock production—the mainstays of the region's economy. Lake Chad has also been a valuable water resource for those living in the catchment communities. Crop, livestock, and fish production has supported local economies in terms of income generation and household consumption. However, over the last six decades, climate variability has significantly depleted the size of the lake and its resources. In the 1960s, Lake Chad had an area of more than 26,000km². However, by 1997 it had shrunk to less than 1,500 km²,⁶ and dwindled further to 1,350 km² by 2014.⁷ Average annual rainfall in the area has dropped from 320 millimeters to 210 millimeters.⁸ The two major rivers that flow into the lake—the Chari River, which originates in the Central African plateau and provides the lake with 90 percent of its waters, and the Komadugu-Yobe River, which provides about five percent—have diminished significantly.⁹

In short, Lake Chad has lost an astounding 90 percent of its volume since the 1960s.¹⁰ The diminished waters are becoming uninhabitable to fish and other water life, thus worsening the living conditions of the communities that depend on the lake for their livelihoods. For example, in the 1960s, the lake held approximately 135 species of fish, and fishermen captured about 200,000 metric tons of fish every year which, in turn, created about 200,000 jobs for commercial fish sellers.¹¹ Since then, however, between five and eight species of fish have died out in the lake, and in one part of the lake, fishing yields have plummeted by up to 90 percent.¹² The alarming depletion of the lake's resources is a result of increased temperatures, desertification, soil infertility, and other environmental degradations. Beyond the negative impact on marine resources, climate change has also drastically reduced livestock production and crop yields, thereby exacerbating food insecurity and poverty given that 80-90 percent of the local population in the Lake Chad Basin depends on agriculture, livestock, and fisheries.¹³ This development has particularly impacted youths and women, who have been left out of productive employment that would normally sustain them.¹⁴

In addition to the negative impact of climate change, a population surge in the region has also exacerbated pressure on the depleted resources of Lake Chad. From the 1960s to the 2000s, the number of people whose livelihoods depended on the lake had surged from an estimated 13 million to about 30 million.¹⁵ This is expected to increase to 80 million by 2030.¹⁶ Rapid population growth has increased the region's demand for water for drinking, sanitation, cooking, and other household activities. An additional pressure is that the shrinking lake has forced some local farmers to resort to an environmentally damaging cultivation practice known as lake-bottom cropping—or receding-moisture cultivation—which further degrades and pollutes Lake Chad's water.¹⁷

The Lake Chad Basin's vulnerability to climate change is heightened by the region's lack of economic diversification and its outmoded agricultural practices. This is further compounded by inadequate public investment in education, healthcare, and sustainable alternative employment opportunities for youths. As a result, the region has experienced increased levels of adolescent pregnancies and youth unemployment,

along with growth in the low-productivity informal sector and a decline in the proportion of wage earners.¹⁸ These factors in turn have contributed to spikes in migration, crime, and associated tensions in the region.

Lake Chad's dwindling resources and the associated agricultural disruption, mass youth unemployment, and increased poverty have helped fuel the spread of Boko Haram and ISWAP violence across the region. In particular, poverty among youths has made them susceptible to recruitment by violent extremist groups and has helped to perpetuate violence in vulnerable communities.¹⁹ These groups' violent actions have displaced populations, hampered agricultural activities, and triggered widespread humanitarian crises in a region already characterized by food insecurity, poverty, and environmental degradation. As of February 2020, there were an estimated 9.8 million people requiring humanitarian assistance in the Lake Chad Basin.²⁰ In Nigeria's northeastern states of Adamawa, Yobe, and Borno alone, there were about 1.8 million internally displaced persons (IDPs) as of December 2019, while Niger's Diffa region had 111,058 IDPs in the same period.²¹ Cameroon's northern region had about 297,380 IDPs as of January 2020, while Chad's Lac region hosted about 169,003 IDPs in the same period.²² Additionally, there are about 239,370 Nigerian refugees in the Lake Chad Basin areas of Cameroon, Chad, and Niger.²³ This complex humanitarian emergency has heightened insecurity in the region.

Linkages Among Violent Extremism, Climate Change, Diminishing Resources, and Instability in the Lake Chad Basin

The impact of climate change in the Lake Chad Basin—including warmer temperatures, drought, irregular rainfall, declining water levels, and degrading pastureland—has generated two patterns of conflict and violence in the region: firstly, increased competition over scarce water resources; and secondly, increased human migration.²⁴ Heightened competition over resources has been driven by the twin engines of population surge and lake degradation, while migration has been largely driven by economic motives as farmers, pastoralists, and fishermen go on the move to seek livelihood opportunities. The parallel increases in resource competition and population migration have caused tensions and violence in relations between host communities and migrants, including farmer-herder conflict, intra- and inter-community clashes, and ethnic strife. Boko Haram and ISWAP exploit these tensions to increase their operations and prey on communities throughout the Lake Chad Basin.

Furthermore, the plundering of natural resources, including fisheries, livestock, and food crops by extremist groups, has exacerbated the region's climate-induced food insecurity.²⁵ Terrorist attacks on farms have significantly degraded agriculture production by limiting local farmers' access to and control of farmlands. The region's food security crisis weakens household sustainability and fuels migration by populations in search of food. Moreover, food prices in the region have spiked because of food scarcity, further harming vulnerable populations. Food insecurity has increased with over 7.5 million people currently categorized as severely food insecure,²⁶ further fueling the complex humanitarian crisis in the region.

The Lake Chad Basin's rapidly diminishing resource base also correlates with a surge in organized crime in the region. This manifests in drug and human trafficking, kidnapping of women, girls, and children, as well as smuggling of illicit goods—all of which help sustain violent conflicts and the operations of armed groups in the region. Moreover, water scarcity, environmental degradation, and soil infertility have increased economic deprivation among the region's youth, such that many turn to violence and organized crime. Notably, Boko Haram and ISWAP have exploited this to recruit young people to engage in the trafficking of

drugs and SALW that sustain their violent operations. Porous borders between the Lake Chad Basin countries facilitate the penetration of SALW and other contraband goods that help sustain the inter-ethnic and farmer-herder conflicts exploited by extremist groups in order to increase their grip on this fragile region. Rising Boko Haram and ISWAP violence has harmed livelihoods in a region that was already facing sustainability threats stemming from diminished access to natural resources, including agriculture land for cultivating and livestock grazing, fish stock, and vegetation.

Response Strategies and the Challenge of Implementation and Coordination

In response to the Lake Chad Basin's dangerous nexus between extremist violence and environmental degradation, regional and international partners have developed and activated a number of strategies to mitigate the associated human security challenges.

The Lake Chad Basin Commission (LCBC), for example, was established by the regional states in 1964 to manage water resources, preserve the ecosystem, and promote peace and security.²⁷ Decades later, in 2008 the LCBC developed the Lake Chad Basin Strategic Action Programme (SAP) in collaboration with international partners. The SAP seeks to address seven key environmental challenges: variability of hydrological regime and fresh water availability, water pollution, decreased viability of biological resources, loss of biodiversity, loss and modification of ecosystems, sedimentation in rivers and other water bodies, and invasive species.²⁸ Essentially, the strategy seeks to recover lands and address water degradation in order to stabilize affected communities. However, the LCBC's efforts to address climate change and implement adaptive water management measures are undermined by its institutional ineffectiveness. This is evident in the Commission's inability to prevent construction of dams by states and control other human activities that endanger the lake. Moreover, the lack of involvement of the indigenous population in the Commission's work undermines the realization of adaptive water management measures.²⁹ The Lake Chad Basin's local populace, which has centuries-old history with the lake, possesses water and resource management knowledge that should be integrated into the LCBC's planning of climate and water management adaptation efforts. However, this local knowledge remains largely untapped in the Commission's planning and implementation of Lake Chad Basin climate adaptation measures.

In the security sphere, the Multinational Joint Task Force (MNJTF) was established by the LCBC in 2012 to combat Boko Haram and other terrorist insurgencies in the basin. The region's counterterrorism strategy is to create a secure environment in the areas affected by terrorist activity and facilitate implementation of the overall stabilization programs of the LCBC member states.³⁰ This includes restoration of full state authority, return of IDPs and refugees, and delivery of humanitarian assistance to the affected populations in the region.³¹

The MNJTF enjoys strong international support. For example, the African Union's Peace and Security Council (PSC) endorsed the MNJTF in November 2014.³² Moreover, the severity of the terrorist threat to regional stability has also galvanized support from international partners such as the United States, France, and the European Union in the area of capacity building. This capacity building support includes training troops, providing equipment, and funding logistics operations. As a result, the MNJTF has made modest progress in degrading Boko Haram, arresting militants, rescuing hostages, and reclaiming areas previously controlled by terrorists and other armed groups in Niger, Cameroon, and northeastern Nigeria. However, terrorists and other violent extremist groups continue to adapt to conditions and exploit vulnerabilities to increase the spread of violence in the Lake Chad Basin.

The inability of the MNJTF to stem the growth of terrorism and cross-border crime is a result of numerous challenges. Prominent among them is the MNJTF's overly broad mandate coupled with its capacity limitations, which undermines its counterterrorism efforts. Additionally, inadequate funding constrains its operations. Also, the MNJTF's military response has proved to be inadequate in addressing the root causes that fuel terrorism and extremism in the region.

International partners provide varied responses to the region's humanitarian crisis. For example, the United Nations Development Programme (UNDP) and the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) have mounted responses aimed at mitigating the Lake Chad Basin's humanitarian crisis and strengthening its resilience for sustainable development.³³ These UN responses are comprised of medium- and long-term approaches to resilience and recovery. The medium-term response seeks to restore livelihoods and access to social services such as water, health, and education, and strengthen social cohesion in fragile communities. The long-term response focuses on the modernization and expansion of agriculture to improve livelihoods. It also includes strengthening climate change adaptation and natural resource management by developing more efficient local governance, while fostering social cohesion and reconciliation.

International responses by UNDP, OCHA, and others have provided emergency humanitarian assistance including food, water, and medical support to vulnerable populations affected by conflicts (IDPs, refugees, and returnees) in northern Cameroon, the Lac Region of Chad, northeastern Nigeria, and the Diffa Region of Niger.³⁴ These organizations also provide incentives to improve livelihoods in vulnerable communities of farmers, herders, and fishermen. Unfortunately, inadequate coordination among these international organizations and their programs has resulted in failure to align their responses and objectives with local, national, and regional responses.³⁵ Their responses are also hindered by the weak capacity of the LCBC member states and the region's persistent terrorist, ethnic, and religious violence.

Conclusion and Way Forward

The underlying drivers of the complex security crisis in the Lake Chad Basin are multifaceted and intertwined. The primary driver is the climate change-driven shrinking of Lake Chad. The dwindling of the lake's resources has devastated millions of people whose economic livelihoods depend on its ecosystem. This has helped fuel terrorism and extremist violence and heightened humanitarian crisis across the Lake Chad Basin. Although response strategies for mitigating the region's security threats abound, what is critically needed to effectively stabilize the Lake Chad Basin is for stakeholders to ensure robust alignment of climate change adaptation strategies with counterterrorism strategies. It is also imperative for international partners to enhance their collaboration and coordination and to align their actions with local, national, and regional strategies aimed at mitigating the growing humanitarian crisis, strengthening governance, and fostering social cohesion in communities across the region.

Osei Baffour Frimpong is a Regional Researcher and Conflict Analyst with the West Africa Network for Peacebuilding (WANEP), a member organization of the Southern Voices Network for Peacebuilding (SVNP) in Ghana. He was a Southern Voices Network for Peacebuilding (SVNP) Scholar and an Africa Program Scholar during spring 2020.

1. Stefano De Blasi, "Environmental Migration and Conflict in West Africa," *Security Distillery*, January 23, 2019, <https://thesecuritydistillery.org/all-articles/environmental-migration-and-conflict-in-west-africa>.
2. Nagarajan et al, "Climate-Fragility Profile: Lake Chad Basin," *Adelphi*, (2018), https://www.academia.edu/36601661/Climate-Fragility_Profile_Lake_Chad_Basin.
3. Freedom C. Onuoha, "Environmental Degradation, Livelihood and Conflicts: A Focus on the Implications of the Diminishing Water Resources of Lake Chad for North-Eastern Nigeria," *African Journal on Conflict Resolution* 8, no. 2 (2008): 35-61, <https://www.ajol.info/index.php/ajcr/article/view/39425>.
4. Abdoulaye Mar Dieye, "Tackling the Crisis in the Lake Chad Basin," *UNDP Our Perspectives*, February 23, 2017, <https://www.undp.org/content/undp/en/home/blog/2017/2/23/Tackling-the-crisis-in-the-Lake-Chad-Basin.html>.
5. Leon Usigbe, "Drying Lake Chad Basin gives rise to crisis," *African Renewal*, December 24, 2019, <https://www.un.org/africarenewal/magazine/december-2019-march-2020/drying-lake-chad-basin-gives-rise-crisis>.
6. Freedom Onuoha, "Environmental Degradation, Livelihood and Conflicts: A Focus on the Implications of the Diminishing Water Resources of Lake Chad for North-Eastern Nigeria," *Accord*, accessed May 11, 2020, <https://www.accord.org.za/ajcr-issues/%EF%BF%BCenvironmental-degradation-livelihood-and-conflicts/>.
7. "Restoring a Disappearing Giant: Lake Chad," World Bank, March 27, 2014, <https://www.worldbank.org/en/news/feature/2014/03/27/restoring-a-disappearing-giant-lake-chad>.
8. "Lake Chad Basin Commission (LCBC)," Global Security, accessed May 19, 2020, <https://www.globalsecurity.org/military/world/int/lcbc.htm>.
9. Ibid.
10. Aminu Bello Masari, Formal Opening Remark and Keynote Address, Paper presented at the International Workshop on Current Challenges and Future Prospects of Lake Chad Basin, organized by the Regional Parliamentary Committee on Lake Chad Basin, Transcorp Hilton Hotel, Abuja, October 27-28, 2006. Cited in Freedom C. Onuoha, "Environmental Degradation, Livelihood and Conflicts: A Focus on the Implications of the Diminishing Water Resources of Lake Chad for North-Eastern Nigeria," *African Journal on Conflict Resolution* 8, no. 2 (2008): 35-61.
11. "The tale of a disappearing lake," *UN Environment Programme*, February 18, 2018, <https://www.unenvironment.org/news-and-stories/story/tale-disappearing-lake>.
12. Eric Odada, Lekan Oyebande, and Johnson Oguntola, "Lake Chad: Experience and Lessons Learned," *International Lake Environment Committee Foundation*, (2005), <http://erepository.uonbi.ac.ke/handle/11295/49120>.
13. Food and Agriculture Organization of the United Nations, "Lake Chad Basin Crisis: Response Strategies (2017-2019)," *Food and Agriculture Organization of the United Nations*, March 2017, <http://www.fao.org/resilience/resources/resources-detail/en/c/886247/>.
14. Ibid, 11.
15. Ibid, 5.
16. Churchill Okonkwo, Belay Demoz, and Sium Gebremariam, "Characteristics of Lake Chad Level Variability and Links to ENSO, Precipitation, and River Discharge," *The Scientific World Journal*, (2014): 1-13, <https://www.hindawi.com/journals/tswj/2014/145893/>.
17. Ibid, 6.
18. United Nations Population Fund West and Central Africa Regional Office, "Demographic Dynamics and the Crisis of Countries around Lake Chad," United Nations Population Fund, (June 2017), <https://wcaro.unfpa.org/en/publications/demographic-dynamics-and-crisis-countries-around-lake-chad>.
19. Theophilus Ekpon, "The Role of Young People in Preventing Violent Extremism in the Lake Chad Basin," *Civil Society Platform for Peacebuilding and Statebuilding and Youth, Peace & Security*, (2017), <https://reliefweb.int/report/chad/role-young-people-preventing-violent-extremism-lake-chad-basin>.

20. United States Agency for International Development, "Lake Chad Basin-Complex Emergency," *USAID*, March 31, 2020, <https://www.usaid.gov/humanitarian-assistance/lake-chad#:~:text=USAID%20is%20responding%20to%20the>.
21. Ibid.
22. Ibid.
23. Ibid.
24. Ibid.
25. Ibid.
26. "Lake Chad Crisis," Plan International, accessed on May 16, 2020, <https://plan-international.org/emergencies/lake-chad-crisis>.
27. "Projects," Lake Chad Basin Commission, accessed on May 19, 2020, <http://www.cblt.org/en/node/72>.
28. "Strategic Action Programme for the Lake Chad Basin: Agreed by the LCBC Member States of Cameroon, Central African Republic, Chad, Niger, and Nigeria," June 11, 2008, <https://iwlearn.net/resolveuid/2cc8f6b24b896184e77164ab75cbf7b1>.
29. Mohammed Bakar, "Challenges of Adaptive Water Management in the Lake Chad Basin," *International Journal in Management and Social Sciences* 3, no. 9 (September 2015): 10-18, https://www.academia.edu/36020231/CHALLENGES_OF_ADAPTIVE_WATER_MANAGEMENT_IN_THE_LAKE_CHAD_BASIN.
30. African Union "Report of the Chairperson of the AU Commission on regional and international efforts to combat the Boko Haram terrorist group," January 29, 2015, www.peaceau.org/uploads/cps484-rpt-boko-haram-29-1-2015.pdf.
31. Ibid.
32. William Assanvo, Jeannine Ella A Abatan, and Wendyam Aristide Sawadogo, "Assessing the Multinational Joint Task Force Against Boko Haram," *Institute for Security Studies*, no. 19 (September 2016), <https://issafrica.s3.amazonaws.com/site/uploads/war19.pdf>.
33. United Nations Development Programme and the United Nations Office for the Coordination of Humanitarian Affairs, "Resilience for Sustainable Development in the Lake Chad Basin," *UNDP and UN OCHA*, (August 2018), <https://landportal.org/fr/library/resources/resilience-sustainable-development-lake-chad-basin>.
34. Ibid, 20.
35. Jason Rizzo, "A Shrinking Lake and a Rising Insurgency: Migratory responses to Environmental Degradation and Violence in the Lake Chad Basin," *The State of Migration and Environment*, (2015), <http://labos.ulg.ac.be/hugo/wp-content/uploads/sites/38/2017/11/The-State-of-Environmental-Migration-2015-13-29.pdf>.

Cover Images: NASA Landsat satellites captured shrinkage of the Lake Chad Basin. The first image (Landsat 1) is from 1973 and the second image (Landsat 8) is from 2017. Red coloring indicates vegetation, and blue and grey coloring indicate water. Photo courtesy of NASA Landsat via NASA Goddard Space Flight Center and U.S. Geological Survey. <https://earthobservatory.nasa.gov/images/91291/the-ups-and-downs-of-lake-chad>.

The Africa Program

The Africa Program works to address the most critical issues facing Africa and U.S.-Africa relations, build mutually beneficial U.S.-Africa relations, and enhance knowledge and understanding about Africa in the United States.

The Program achieves its mission through in-depth research and analyses, including our blog *Africa Up Close*, public discussion, working groups, and briefings that bring together policymakers, practitioners, and subject matter experts to analyze and offer practical options for tackling key challenges in Africa and in U.S.-Africa relations.

The Africa Program focuses on four core issues:

- i. Good governance and leadership
- ii. Conflict prevention, peacebuilding, and security
- iii. Trade, investment, and sustainable development
- iv. Africa's evolving role in the global arena

The Program maintains a cross-cutting focus on the roles of women, youth, and technology, which are critical to Africa's future: to supporting good governance, to securing peace, to mitigating poverty, and to assuring sustainable development.

One Woodrow Wilson Plaza
1300 Pennsylvania Avenue, N.W.
Washington, DC 20004-3027

 www.wilsoncenter.org/africa

 africa@wilsoncenter.org

 facebook.com/africaprogram

 [@AfricaUpClose](https://twitter.com/AfricaUpClose)

 202.691.4118