

Lake Chad: A Climate of Fragility

Written by Janani Vivekananda, Martin Wall and Susanne Wolfmaier

This PDF is auto-generated for reference only. As such, it may contain some conversion errors and/or missing information. For all formal use please refer to the official version on the website, as linked below.

Lake Chad: A Climate of Fragility

<https://www.e-ir.info/2018/05/20/lake-chad-a-climate-of-fragility/>

JANANI VIVEKANANDA, MARTIN WALL AND SUSANNE WOLFMAIER, MAY 20 2018

Climate change increasingly threatens the stability of states and societies. In the context of global security, it is best understood as a 'threat multiplier' that interacts with and compounds existing risks and pressures. When climate change converges and interacts with other environmental, economic, social, and political shocks and pressures, it can increase the likelihood of instability or conflict. This threat is particularly virulent in fragile and conflict-affected situations where governments and societal institutions already struggle to achieve security and equitable development. At the same time, conflicts and fragility often contribute to environmental degradation and undermine the ability to adapt to climate change, thus creating a vicious circle of increasing vulnerability and fragility. The complex and systemic risks that arise out of the interaction between climate change and other environmental, economic, social, and political pressures are what we call climate-fragility risks.

International organisations are becoming increasingly aware of these links, particularly in West Africa and the Sahel region. Indeed, the UN Security Council recently recognised 'the adverse effects of climate change and ecological changes among other factors' resulting in drought, desertification, land degradation and food insecurity in this region (UN Security Council, 2017).

Climate-fragility is particularly apparent in the Lake Chad region. Located at the intersection of Cameroon, Chad, Niger and Nigeria, the region around Lake Chad has been suffering from one of the world's largest humanitarian emergencies since the rise of Boko Haram almost a decade ago. Changing weather patterns combined with violent conflict have resulted in restricted access to natural resources such as land and water that are critical to supporting livelihoods, the displacement of 2.5 million people, reduced social cohesion and stressed relations between communities and government.

An Oasis in the Desert

Lake Chad is located in the Sahel at the very south of the Sahara Desert. The Lake Chad Basin covers a huge area, 2,500,000 km², more than eight per cent of the African continent and is extremely diverse, with desert in the north and humid tropics in the south. The lake itself is largely fed by precipitation from the south. Its unique geography has created an oasis in an otherwise arid region.

The surface area of the lake is highly variable both intra- and inter-annually. It is also extremely shallow, with an average depth of only three metres. This can have a dramatic effect on the size of the lake. For example, an average intra-annual variation of one metre between summer and winter months translates into a difference of some 6,000 km² to almost 12,000 km².

On top of this, the inter-annual variation in Lake Chad's size has varied significantly throughout its history. It is this inter-annual variation that gives rise to concerns about its disappearance with many reports focusing on its shrinkage from some 22,000 km² in 1963 to 2,500 km² in 1987. However, that trend has reversed with the lake reaching 14,000 km² in 2013 (Maley 1981; U.S. Geological Survey 2018).

The Political Economy of the Lake Chad Basin

Lake Chad: A Climate of Fragility

Written by Janani Vivekananda, Martin Wall and Susanne Wolfmaier

The four countries of Cameroon, Chad, Niger and Nigeria that make up the Lake Chad Basin see some common political dynamics. Chad, Niger and Nigeria have experienced periods of military rule. Chad and Nigeria politics are shaped by oil exploration. Transitions from military rule to democracy have been seen in Niger and Nigeria. In all four countries, the region is seen as distant from the centre with politicians largely uninterested in its development.

The Lake Chad region is marked by low socio-economic development indicators, low levels of education, high levels of poverty, low levels of national integration, historical government neglect and perceived and actual marginalisation. Whereas 700,000 people lived around the Lake in 1976, today the area is home to approximately 2.2 million people, drawn there due to drought and poor livelihoods elsewhere, with this number set to reach 3 million in 2025, with 49 million people in total living from its resources (Magrin and Lemoalle, 2015). In all the four countries, the region is seen as distant from the centre with politicians largely uninterested in its development.

Despite this, before the conflict, there was thriving cross-border trade in agricultural produce, fish as well as other goods and commodities. Lake Chad acted as a trading hub offering economic opportunities and resources of which people living around the Lake took advantage despite the lack of national government's policies to support this (ICG, 2017). Indeed, many people in the region talk about a total non-existence of government presence and impact, including the lack of public services, and very low levels of trust towards central governments.

Peace and Security Overview

The security situation has been particularly volatile after the rise of Jama'atu Ahlis Sunnah Lida'awati Wal Jihad, commonly known as Boko Haram in Nigeria in 2009, and the resultant conflict. Since 2009, Boko Haram has declared control over territory and spread to neighbouring countries, set off bombs including through 'suicide' bombers, forcibly recruited and kidnapped and conducted attacks against women and girls, including sexual violence and forced marriage. A complex dynamic now exists with a number of national military, armed opposition groups and vigilante groups all operating in the region. This has consequences for interplay between the movement of people, food security as well as traditional gender and governance roles.

To counter the rising threat, in the absence of a perceived state response to the insecurity, a volunteer force of primarily young people working with the military, the Civilian Joint Taskforce, was formed and successfully drove Boko Haram out of Maiduguri, the state capital of Borno. A state-led Multi National Joint Task Force (MNJTF), was later set up. Consisting of troops from Chad, Cameroon, Niger and Nigeria alongside local vigilante groups, the MNJTF drove Boko Haram from captured territory in 2015. Afterwards, Boko Haram split into at least two distinct groups operating in the region.

Since March 2014, attacks have taken place in northern Cameroon before beginning in southern Niger and western Chad in early 2015 with fighters moving easily across borders (ICG, 2017). They have support of some of the population in all four countries but also a lot of anger directed against them due to their attacks on citizens.

Impact of Violence

The impact of violence has been disastrous for livelihoods across the region. Millions of people who fled their homes during the height of the conflict in 2014/15 are now in their third year of displacement. In Borno state the number of people living in camps is almost equal to the amount living in host communities. Among the poorest people, they live in makeshift shelters with little or no access to food, water, health or education (Oxfam, 2018).

The conflict has had an impact on several parts of people's livelihoods. Access to natural resources such as land for farming and the lake for fishing has been restricted. The closure of markets along with the destruction of infrastructure and the loss of financial and productive assets have reduced production and contributed to an overall increase in prices of staple commodities which in turn, affects purchasing power and increases food insecurity. Cross border trade, too has been affected with military activity limiting the flow of goods and people, thus affecting traditional trade routes and access to markets (Oxfam, 2018).

Lake Chad: A Climate of Fragility

Written by Janani Vivekananda, Martin Wall and Susanne Wolfmaier

The nine years of conflict increased local inter-communal tensions and exacerbated violence over the access to natural resources and impacted on relations between population groups, such as IDPs and host communities, men and women, community members and their leaders or relatives of presumed armed opposition groups members and those harmed by violence (ICG, 2017).

Real Climate Impact

So, what then is the effect of climate change on the Lake Chad region? In short, the crucial climate vulnerabilities do not derive from the lake's supposed shrinking, but from significant uncertainties over variability and, hence, future water availability – at the seasonal, inter-annual, and multi-decadal timescales. More research is needed to understand the variability of Lake Chad and the interaction between different forcing mechanisms (Roehrig et al. 2013; Defrance et al. 2017).

The significant uncertainties over variability and future water availability of water resources cause critical climate vulnerabilities in the Lake Chad region and major challenges to the livelihoods of the population. Whereas the decrease of Lake Chad's water levels has made fertile land accessible to grow crops and pasture cattle, occupations such as fishing and irrigated agriculture lost their livelihoods. Hence, these highly variable climate conditions pose a threat to food security and employment opportunities in the already fragile Lake Chad region.

Climate Fragility Risks

The conflict has reduced the resilience, including the ability to adapt to climate change, of the population. There are four main climate-fragility clusters as a result.

First, population groups have faced increasing restrictions in accessing natural resources and livelihoods such as fishing grounds and agricultural land by different conflict actors. Previous coping strategies that involved shifting livelihoods to adapt to climate and weather variability have become less viable as access to land and water are restricted by conflict actors. Compounding the challenge, increasing climate and weather variability has made these traditional livelihood practices less viable. Fieldwork has revealed that farmers are struggling to make these shifts between different agricultural practices, given the extreme weather and variability.

Second, mass displacement has left large swathes of the population extremely vulnerable. They lack basic resources, such as land for subsistence farming, and are often dependent on humanitarian aid for their survival. Many people have been displaced numerous times and their ability to cope with future pressures is reduced, given their diminishing (financial) resources. On top of this, resources in host areas are under increasing pressure leading to competition between the host and displaced populations as well as the degradation of natural resources such as deforestation for firewood. Consequently, the resilience of both the displaced and host communities is weakened.

Third, the conflict has undermined a key element of resilient communities: social cohesion within communities and the relationships between different population groups as well as between population groups and the government. Mistrust is emerging within and between communities, with, for example, suspicion between individuals and groups who are perceived as belonging to or supporting various armed groups. This can damage the ability of groups to cooperate, leaving them less resilient to shocks and pressures. Simultaneously, traditional governance structures have been ruptured by the conflict as leaders have been killed, moved away or lost trust, leaving power vacuums and weakened community leadership behind.

Finally, the already strained relationship between governments and different population groups has deteriorated even further. Military interventions and human rights abuses have created more distrust, which will impede any future intervention and efforts to address conflict and climate risks.

It is possible that this reduction in resilience will lead to further conflict over natural resources, livelihood insecurity and possible recruitment into non-state armed groups from disaffected groups, particularly young men. These climate fragility risks create a self-reinforcing feedback loop. Conflict and fragility undermine the resilience of

Lake Chad: A Climate of Fragility

Written by Janani Vivekananda, Martin Wall and Susanne Wolfmaier

communities making them more vulnerable to climate change which, at the same time, is destabilising livelihoods and increasing competition around scarcer natural resources. If this vicious circle is not broken, it is likely to perpetuate the current crisis and continue the path of conflict and fragility.

Any future interventions in and around Lake Chad will have to be mindful of its particular climate-fragility and these trends that are likely to shape its future.

Notes

This article draws on Nagarajan, C., Pohl, B., Rüttinger, L., Sylvestre, F., Vivekananda, J., Wall, M. and Wolfmaier S. (2018). *Climate-Fragility Profile: Lake Chad Basin*. Berlin: adelphi.

References

Defrance, D., Ramstein, G., Charbit, S., Vrac, M., Famien, M., Sultan, B., Swingedouw, D., Dumas, C., Gemenne, F., Alvarez-Solas F., and Vanderlinden, JP. (2017). Consequences of rapid ice sheet melting on the Sahelian population vulnerability. *Proceedings of the National Academy of Sciences* 114, pp. 6533-6538.

International Crisis Group. (2017). Niger and Boko Haram: Beyond Counter-Insurgency. [Online] Brussels, ICG, Available at <https://d2071andvip0wj.cloudfront.net/245-niger-and-boko-haram-beyond-counter-insurgency.pdf>

Magrin, G. and Lemoalle, J. (2015). Atlas du Lac Tchad. Paris: Passages.

Maley, J. (1981). Études palynologiques dans le bassin du Tchad et paléoclimatologie de l'Afrique nord-tropicale: de 30.000 ans à l'époque actuelle. *Travaux et documents de l'ORSTOM* 129.

Nagarajan, C., Pohl, B., Rüttinger, L., Sylvestre, F., Vivekananda, J., Wall, M. and Wolfmaier S. (2018). *Climate-Fragility Profile: Lake Chad Basin*. Berlin: adelphi.

Oxfam (2018). Supporting Livelihoods in the Lake Chad Basin: Ways Forward for Conflict-Affected Communities in Nigeria, Niger, and Chad. Oxfam Briefing Note. Oxford: Oxfam International. Available at <https://www.oxfam.org/en/research/supporting-livelihoods-lake-chad-basin>

Roehrig, R., Bouniol, D., Guichard, F., Hourdin, F. and Redelsperger, J. (2013). The Present and Future of the West African Monsoon: A Process-Oriented Assessment of CMIP5 Simulations along the AMMA Transect. *Journal of Climate*, 26(17), pp.6471-6505.

United Nations Security Council (2017). Resolution 2349. Available at <https://www.un.org/press/en/2017/sc12773.doc.htm>

U.S. Geological Survey. (2018). *Earthshots: Satellite Images of Environmental Change. Lake Chad, West Africa*. Available at <https://earthshots.usgs.gov/earthshots/Lake-Chad-West-Africa> \l "ad-image-4

About the author:

Janani Vivekananda is a Senior Project Manager at adelphi where she specialises in climate change and peacebuilding. In this role, she focuses on the areas of peace and security, vulnerability, adaptation, conflict and risk analyses, conflict and resources, and urban governance. She leads adelphi's Lake Chad Risk Assessment project.

Lake Chad: A Climate of Fragility

Written by Janani Vivekananda, Martin Wall and Susanne Wolfmaier

Martin Wall is an Irish Research Council/European Commission funded Marie Curie CAROLINE Fellow under the Marie Skłodowska-Curie grant agreement No 713279 specialising in the area of climate, peace and security. He is based in adelphi and University College Cork.

Susanne Wolfmaier is a Research Analyst at adelphi working on the topics of climate, peace and security. Her work focuses on conflict analysis within the context of climate change and fragility.