

The Conflict Studies And Analysis Project (SAAP) at The Global Initiative For Civil Stabilisation

Assessment Paper

Assessing Nigeria's Vulnerability To Extreme Weather Events

Authors Point Of View:

Sola Tayo is a Senior Associate Fellow at the Conflict and Analysis Project at the Global Initiative For Civil Stabilisation, a Broadcast journalist with the BBC and an Associate Fellow at The Royal Institute for International Affairs (Chatham House).

Murtala Abdullahi is a Junior Associate Researcher at the Conflict Studies And Analysis Project at the Global Initiative For Civil Stabilisation, focusing on the impacts of climate change and environmental/ecological degradation on stability and security.

Background:

Nigeria's recent heatwave saw temperatures climb beyond 40 degrees Celsius in coastal areas, while in more arid areas of its north, temperatures of 45 degrees Celsius were recorded, between March and May.

As a developing country with multiple developmental challenges and a fast growing population, infrastructure and economic development have been the main focus for successive governments. But while the current administration grapples with how to increase electricity generation and improve transport connectivity one thing that is not discussed as much is Nigeria's preparedness for dealing with the effects of climate change and minimising the damage caused by extreme weather events.

This paper attempts to assess how Nigeria is affected by climate change and what measures the government has put in place to protect the population from the health and economic risks associated with it.

Climate Change Vulnerability

According to a recent Pew Research poll[1] 41% of Nigerians see climate change as a major threat to their nation compared to 71% of Kenyans. While there are caveats for polls from Nigeria, it is however undeniable that climate change is not the biggest concern of many Nigerians, however its effects are felt by the population, with extreme weather events impacting directly and indirectly on their employment, education and health.

As the population grows and demand for resources increases there is a risk that Nigeria's ability to secure food supplies for its 200 million population, which is rapidly growing is increasingly coming under strain.

Excessive heat and other extreme weather events also pose threats to the long term future of the healthcare system– with mass outbreaks of dehydration, heatstroke and all kinds of diseases during such periods of national emergencies occasioned by extreme weather events, further burdening a chronically stretched and underfunded healthcare system.

ASSESSMENT PAPER

Then there is the issue of climate related conflicts which have contributed immensely to violence between elements of the nomadic and settled population in the central part of the country, as well as an increase in migration from conflict-addled rural areas to relatively safe urban areas which is creating sprawls of camps for displaced persons.

Also as agricultural communities increasingly suffer from erratic weather that has seen the rains this year delayed by as much as three months into the planting season this year, people are forced to abandon the farms and head to the towns, thus fueling a demand for land for building. Like much of Africa, access to and ownership of land is a highly emotional issue in Nigeria and change of land usage as a result of climate change will only contribute to increased tensions and conflict within communities.

Nigeria's president, Muhammad's Buhari stressed Nigeria's commitment to tackling climate change in his 2015 inaugural speech. [2] Nigeria became a Party to the United Nations Framework Convention on Climate Change in 1994 and ratified its Kyoto Protocol (which set international emissions reducing targets) in 2004. So while Nigeria's international commitments aren't in doubt, it is not yet clear how active the government is in dealing with events at home, or preparing for the future.

The Difficulties Of Responding

A C40 study called "The future we don't want"[3] found that 354 major cities across the globe already experience average summer temperatures over 35C.

This number is predicted to climb to 970 by 2050. On days when temperatures reach 35C, a marked increase in hospital admissions and deaths occur in most countries.

The research shows that only a few cities in Africa are dealing with extreme heat currently but this is set to increase dramatically, particularly for southern, western and northern Africa. By 2050, many of the most at risk cities with large urban populations in poverty will be in West Africa, including Nigeria which the regions most populous country.. According to the Nigerian Meteorological Agency (NiMet), Nigeria experienced extreme temperatures this year between March and May. The worst hit states were Borno, Yobe, Adamawa, Kebbi, Sokoto, Zamfara, Katsina, Kano, and Jigawa. The situation also prompted fears of outbreaks of diseases such as meningitis, cholera, among others[4].

The three states of Borno, Yobe and Adamawa are at the epicentre of the Boko Haram conflict which has raged since 2009. Kebbi, Sokoto, Zamfara and Katsina States, have been plagued by a decade long series of low intensity conflicts revolving around rural banditry, which has recently started to pick up steam, leading to the depopulation of many communities.

The Nigerian government's ability to tackle climate related issues is hindered by active internal conflicts, weak political will and, in some cases, poor governance. Nigeria's main internal conflicts are in regions heavily affected by climate related environmental degradation.

ASSESSMENT PAPER

In the Northeast, an insurgency by militants linked to the Islamic State group is one of many factors disrupting efforts to restore the biodiversity and halt the degradation of the Lake Chad. In the North Central a reduction in available grazing land is fueling violence between farmers and nomadic cattle herders.

In the South, the Niger Delta, home to Nigeria's oil producing states, has long been a hotbed of armed conflict between militants and a government they hold responsible for allowing oil companies to pollute their region's land and in turn destroy the livelihoods of local farmers and fishermen. Although many of the region's environmental problems are man made (in the form of oil spills and air and water pollution as a result of the activities of the extractive industries) the Niger Delta states are also vulnerable to the effects of rising sea levels and coastal erosion.

Nigeria increasingly experiences floods, and heatwaves, and is considered one of the most vulnerable countries in the world to the effects of climate change[5].

Land degradation is also a problem as Nigeria's population increases putting stress on the availability of several resources. Almost a quarter – 24 percent - of the population live in high climate exposure areas[6] according to the USAID.

The southern coastal areas are vulnerable to storm damage while its internal network of rivers are at a constant risk of flooding.

Flooding is one of Nigeria's biggest environmental concerns and a cause of large scale internal displacement. In 2012, Nigeria saw some of the worst flooding in its recent history. 431 people died and 1.3 million were displaced when unexpected heavy rainfall caused rivers to overflow[7] Farms, communities and critical infrastructure were destroyed or washed away.

2015 brought more deadly flooding when more than 1200 people were displaced and 4,500 farms destroyed by flooding in Cross River State in the coastal area. In the North of the country 53 people died and 100,000 were displaced.

Farmers in the South of Nigeria, are familiar with the effects of flash flooding – common during Nigeria's "rainy season" – which waterlogs farmland and renders it infertile. However a bigger problem may come in the form of salt water which can enter farming land as a result of a rise in sea levels and ruin crops and make land useless for conventional farming.

Research is being carried out to try and turn this negative into a positive with some encouraging results that could see farming with salty water as more of a help than a hindrance in the war on food insecurity. The Netherlands has had success with growing saline tolerant crops and in 2016 invested in research in Ghana.[8] Food is now being grown on previously abandoned farming land[9].

ASSESSMENT PAPER

In Senegal, farming communities are adopting a different approach by building dykes to keep out salty water and protect their supplies of fresh water[10]. However, there is no discernible government-led effort to study and adapt any of the aforementioned innovations, to aid Nigerian farmers in adapting to the challenges posed by climate change in food production.

Small scale farmers will be the hardest hit by the effects of climate change. They are vulnerable to a reduction in productivity, the loss of crops and lack of stable employment, and there is no discernible long term planning or programming by the Nigerian government, yet, to prepare these farmers for the inevitable future.

According to Nigeria's submission to the UN Framework Convention on Climate Change(UNFCCC) in 2015 if nothing is done to protect farmers from the effects of climate change, agricultural productivity could decline between 10 to 25 per cent by 2080 and in parts of the north, the yield from rain fed agriculture could see a drop of up to 50 percent. [11]

Southern Nigeria's coastline is already changing as a result of erosion caused by sea surges and tidal waves. Nigeria's submission to the UNFCC warns that global warming attributed sea level rises would result in the loss of 35 percent of the Niger Delta. This could rise to 75 percent by 2100 if current trends continue.

If action is not taken to combat rising sea levels the Niger Delta will lose land which will increase climate and resource induced migration, to other area. Given Nigeria's long history of intercommunal and ethnic violence, it is hard to imagine such a future without imagining large scale violence between such migrant communities out of the receding Delta, and the indigenous populations in the areas they migrate to.

Water

Fewer than 40% of Nigerians have access to potable water. Unpredictable weather brings variations in rainfall often resulting in a wetter south and a much drier and less humid north. This can increase the risk of drought and dry up water bodies in the north while flooding areas of the south.

In the far north east of Nigeria, the Lake Chad, which is also shared by Chad, Niger and Cameroon is the main source of water, food and employment for tens of millions of people. But the lake has fluctuated in size since the 1960s as a result of an increase in population and the impacts of a global rise in temperatures which have contributed to an increase in already high rates of evaporation. The changing size of Lake Chad has had a catastrophic effect on the region's food security and has contributed to the destabilisation of the region.

The local biodiversity has suffered as a result of the reduction in surface water.

But in recent times the region has suffered droughts and combined with the fluctuating

ASSESSMENT PAPER

lake and ongoing insurgencies, has led to a reduction in pastures for herders. This has led to a southward migration of cattle herders which, in turn, has created local internal conflicts between landowners and nomads along the routes the herders have followed south.

The governments of the nations that share the Lake Chad have, for decades, tried to address the depletion of the local ecosystem. The Lake Chad Basin Commission was created in 1964 by the four countries bordering the lake and was later expanded to include Central African Republic, Libya, Sudan and Algeria. The Commission's aim is to coordinate the development of the region and sustainably manage the use of water, land and natural resources. In the immediate Lake Chad basin, more than 4 million people suffer from food insecurity.

The Lake Chad Basin Commission has launched public awareness campaigns advising on the best means of preserving natural resources as well as holding high level conferences with heads of governments, multi-lateral agencies and civil society groups. But the challenges remain and the region continues to suffer the effects of desertification, insecurity and mass migration.

The International Conference on Lake Chad – a meeting supported by the Commission, UNESCO and the Nigerian government - with the aim of restoring the depleting ecosystem was held in February 2018.

The member states of the Commission agreed to an action plan with the aim of educating and empowering communities on how to build resilience to climate change. The insurgencies led by Boko Haram and groups affiliated with the Islamic State group have further complicated efforts to address the problems of the region and are the cause of large scale internal displacement of sections of the population. A pan regional approach to promoting a more efficient use of water is crucial to rebuilding the lake's ability to continue to serve as a provider of food, water and employment for millions of people.

ASSESSMENT PAPER

Nigeria's Actions In Combating Climate Change

The most recent estimates show that Nigeria is responsible for 490 metric tonnes of green house gas emissions annually which equates to just over 1 per cent of global production. Thirty nine per cent of this arises from land-use change and forestry; 33 per cent from energy production (oil and gas extraction, and the power sector); 14 per cent from waste (incineration of municipal waste); 13 per cent from agriculture; and 2 per cent from industry.

As a party to the Paris Agreement, Nigeria has committed to reducing its green house gas emissions by 20 per cent relative to a business-as-usual scenario of economic and emissions growth by 2030, and to pursuing a 45 per cent reduction if sufficient international support is received. It intends to achieve this by ending gas flaring (burning of excess gas from oil and gas production), increasing the use of renewable energy, implementing climate-smart agriculture and championing reforestation efforts.

As part of the Nigeria Climate Change Policy Response (adopted in 2012) the government pledged to increase public awareness and increase public sector participation in addressing the challenges of climate change.

The government also pledged to strengthen institutions to better develop a functional framework for climate governance. A series of strategies, measures and policies were published that include:

- The increased usage of irrigation systems in agriculture
- An increase in access to drought resistant crops and livestock feeds
- Improving the management of forest reserves and enforcement of low impact logging practices
- Expanding sustainable energy sources
- The incorporation of Climate Change into business planning
- Eliminating gas flaring by 2030
- A revival of Nigeria's railway networks to reduce emission caused by trucks using the roadways

Nigeria's commitment on paper, to contributing to global efforts to combat climate change is evident. However its many societal challenges may not allow for rapid changes to be seen at home. During the recent heatwave a lot of advice was centred around drinking plenty of water and staying cool in shaded and air conditioned areas and seeking medical assistance where necessary. This advice was double-edged as Nigeria's power supply is notoriously erratic and many people who can afford to, rely on diesel and petrol generators, thus exacerbating the problem of global warming through the release of greenhouse gases.

END NOTES

- [1] <https://www.pewresearch.org/fact-tank/2019/04/18/a-look-at-how-people-around-the-world-view-climate-change/>
- [2] <https://dailypost.ng/2015/05/29/full-text-of-president-buharis-inauguration-speech/> “I also wish to assure the wider international community of our readiness to cooperate and help to combat threats of cross-border terrorism, sea piracy, refugees and boat people, financial crime, cyber crime, climate change, the spread of communicable diseases and other challenges of the 21st century”.
- [3] <https://www.c40.org/other/the-future-we-don-t-want-homepage>
- [4] <https://www.dailytrust.com.ng/heatwave-hits-borno-kano-adamawa-katsina-others.html>
- [5] <https://www.cop24afdb.org/en/page/implications-africa>
- [6] https://pdf.usaid.gov/pdf_docs/PA00TBFK.pdf
- [7] <http://www.thenewhumanitarian.org/news/2012/10/10/worst-flooding-decades>
- [8] <https://www.government.nl/latest/news/2017/02/23/dutch-saline-agricultural-knowledge-brings-breakthrough-in-food-security>
- [9] <https://www.rabobank.com/en/raboworld/articles/smart-farmer-stories-marc-van-rijsselberghe.html>
- [10] <http://www.thenewhumanitarian.org/feature/2017/09/14/success-against-salt-senegalese-farmers-battle-major-climate-change-threat>
- [11] <https://www.cop24afdb.org/en/page/implications-africa>

