

Nigeria is ranked among the most fragile states in the world. The country faces significant water challenges, which vary greatly from one region to another. Weak governance exacerbates these water challenges, while conflicts over water resources make governance more difficult. There are three main geographical flashpoints where conflict over water is likely to break out. In the north and northeast, Boko Haram has waged a violent insurgent campaign since 2010; among their demands is government provision of clean water. In Nigeria's Middle Belt, changing rainfall patterns are limiting the grazing area of Muslim Fulani herders, who then encroach on the land of predominantly Christian farmers. Conflict over these lands killed more Nigerians than Boko Haram in 2016. Finally, in the Niger Delta, militant groups are attacking oil infrastructure, partially motivated by conflict over rights to land and waterways. Oil spills also contribute to food insecurity and malnutrition in this region.



Ecological Challenges

Nigeria spans a breadth of ecosystem types, each with distinctive weather and precipitation patterns that pose unique challenges. Availability and quantity of water are insufficient in most areas. Even more than physical water scarcity, economic water scarcity is widespread, meaning that there are insufficient technical and financial resources to access existing freshwater supplies.

Because of its already small agricultural yields, political instability, and poor governance, Nigeria is ranked as the 12th-least-ready country to deal with the impacts of climate change by the Notre Dame Global Adaptation Index. These effects are already being felt in many parts of the country. Average temperatures across Nigeria are rising. In the north, more extreme heat and decreasing precipitation are leading to desertification.

Models predict that weather patterns will continue to become more volatile and more severe. Torrential rains and windstorms are becoming more frequent, and sea levels along the coast are projected to rise between 1.5 and 3 feet by 2100, which would cause salinization of the potable water supply and arable land.

In the Niger River Delta, flooding pollutes freshwater aquifers and rivers with

sewage, sediment, and salinity. Besides floods, the primary ecological concern in this region is man-made: oil and natural gas extraction causes hundreds of oil spills annually, degrading water supplies, agricultural lands, and fish habitats. It is estimated that up to 13 million barrels of crude oil have spilled into the environment in Nigeria.



Societal Challenges

The availability of safe drinking water is very limited in Nigeria, and supplying sufficient water grows increasingly challenging as urban populations grow. Poor sanitation and hygiene lead to high rates of diseases like diarrhea, pneumonia, trachoma, and worm-related illnesses, with diarrhea being the second-largest direct cause of child mortality. Limitations in natural resources have led to 40% of all intrastate conflicts in the past six decades.

Water allocation is also a significant problem. Water governance is fragmented, and the Nigerian government generally lacks the resources and expertise to operate effectively. Existing infrastructure is not only insufficient, but also poorly maintained. In response to the Nigerian government's failure to provide basic services like safe water, several insurgent groups have arisen to take matters into their own hands.

In the north, where droughts and floods have already led to the abandonment of hundreds of villages, Boko Haram rose to power with much of its support stemming from widespread frustration over northern citizens being deprived of basic needs like water. Among its guerrilla tactics, the militant group is known to use water as a weapon, poisoning the freshwater sources of their opposition.

Changing rainfall patterns and a reduction of arable land in Nigeria's Middle Belt are becoming a source of ethnic tensions, as Hausa-Fulani nomadic herders increasingly encroach on settled farms in search of places to graze cattle. When cattle damage crops, farmers often retaliate by poisoning the water or grass, or by attacking the herders. In 2014, this conflict caused 1,229 deaths. Conflicts in Africa are more common in years that are unusually wet or dry.

In the Niger River Delta, oil spills have contributed to severe reductions in household food security, and a sharp increase in childhood malnutrition.

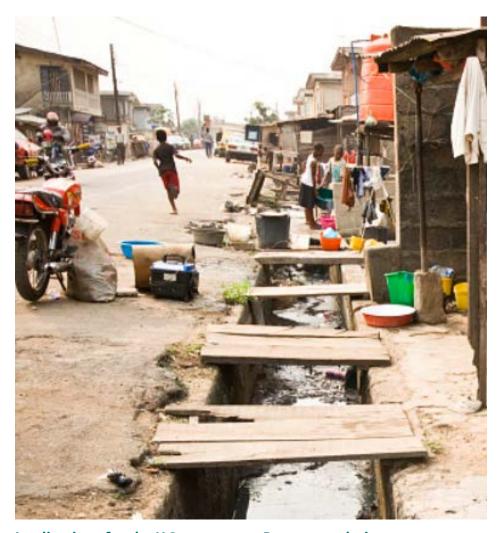
As the Nigerian government has failed to adequately address these problems, communities have turned to protesting the pollution and unequal distribution of



water that jeopardizes their livelihoods. Between 1993 and 1999, around 2,000 protesters were killed as a result of suppression by the Nigerian government, and peaceful protest leader Ken Saro-Wiwa was executed in 1995. Communities have turned to UK courts to demand reparations, but have so far been unsuccessful.

Because of these governance failures, new and more established insurgent groups are responding by attacking oil company infrastructure and personnel. They are calling for better provision of basic services like clean water, as well as more equitable rights to land and waterways. These groups sabatoge oil rigs and destroy underground pipelines, which provide much of the nation's revenue. Ironically, these attacks also frequently cause severe pollution of the same water resources the insurgents seek to protect from environmental degradation.





Implications for the U.S.

Nigeria is the lynchpin of regional stability and a strategic partner for the U.S. in the struggle against extremism. As Africa's most populous country, it also wields strong influence in international and regional institutions, and contributes significant troops to peacekeeping operations on the continent. Nigeria is key to stemming the influence of Al Qaeda in the Islamic Maghreb (AQIM), a group which has already gained footholds in neighboring Niger, Mali, and Mauritania.

Outward migration from Nigeria is also a concern for the U.S. and its allies in Europe. Nigerians are already part of a migratory arc of instability stretching from West Africa through the Maghreb and across the Mediterranean.

Additionally, supply disruptions in Nigeria's oil sector create market uncertainty and upward pressure on global oil prices that impact U.S. consumers.

Recommendations

Interventions should make full use of U.S. assets in our development, diplomatic, and defense arsenal:

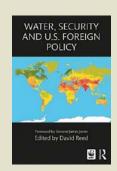
1. Support USAID's research and distribution of drought-tolerant seeds to increase yields in regions that are experiencing more frequent drought.

- 2. Encourage the deployment of technologies developed by the U.S. government and the private sector that provide precise measurements of climate variability, water flows, and groundwater availability, in order to guide resilience-building policies and interventions.
- 3. Enable more effective policies for crisis avoidance and response by utilizing remote sensing capabilities resident in U.S. defense and scientific agencies to predict droughts and their humanitarian consequences.
- 4. Ramp up the existing efforts of U.S. Special Operations Forces to support Nigeria's military capacity to fight Boko Haram and create better conditions for effective water governance.
- 5. Encourage more transparent and accountable governance by providing vocational training, water infrastructure improvements, and technical assistance at the local level.

This summary is drawn from Water, Security and U.S. Foreign Policy, Chapter 7, by Marcus King, George Washington University. Summary prepared by Chelsea N. Spangler, WWF-US.

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Water, Security and U.S. Foreign Policy offers policy-makers a framework for identifying how water-related social and economic disruptions in partner countries can escalate into risks to U.S. security interests. Its 17 case studies explore how ecological change can translate into regional instability, migration, social and ethnic conflicts, the rise of insurgencies, and an expanding narcotics trade, with direct consequences for U.S. overseas interests. The book proposes U.S. responses that can help partner countries forestall social dislocation, rekindle economic growth, and strengthen government legitimacy in order to reinforce U.S. security.

For more about WWF's In Pursuit of Prosperity initiative, visit worldwildlife.org/ipop.

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