

CLIMATE CHANGE AND ITS EFFECT ON NATIONAL SECURITY IN NIGERIA

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Abstract: This paper examines the effects of climate change on security in Nigeria; the study revealed that climate change is able to stir up negative effects in socioeconomic development in the economy of any country particularly developing countries like Nigeria. That climate change undermines human security in the present day, and will increasingly do so in the future, it does this by reducing people's access to natural resources that are important to sustain their livelihoods it also undermines the capacity of states to provide the opportunities and services that help people to sustain their livelihoods, and which help to maintain and build peace. These direct and indirect impacts of climate change on human security and the state may in turn increase the risk of violent conflicts. The paper recommends an integrated approach to development which must seek to understand the existing vulnerability and coping strategies of the local people to changes in their environment and build on them through policy formulation with adequate participation of the local people. A planned adaptation and effective coping strategy will reduce vulnerability to climate change and other changes in the environment. An in-depth understanding of how individuals, communities and natural system can prepare for and respond to changes in climate and non-climate shocks is important to reducing vulnerability to adverse changes in the environment.

Keywords: Climate change; National Security; Nigeria; Conflicts; Resources.

I. INTRODUCTION

"It is no longer a question of whether the earth's climate will change but rather when, where and by how much" Robert T. Watson, Chairman of the United Nations Inter - Governmental Panel on Climate Change.

Nigeria, a nation of 150 million people and confronting deep ethnic divisions, development challenges, and a history of poor leadership, already struggles to meet its resource needs and wants. Failure to share limited resources well underlies many of the violent conflicts that dot the country's social landscape, pitting neighbor against neighbor, Muslim against Christian, patron against client, citizen against the state. Nigeria's climate is also likely to see growing shifts in temperature, rainfall, storms, and sea levels throughout the twenty-first century. These climatic challenges, if unaddressed, could throw already stressed resources such as land and water into even shorter supply. Moreover, poor responses to resource shortages could have serious negative secondary effects, including more sickness and hunger, fewer jobs, and poor economic growth, which in turn could open the door to more violence. Indeed, in a few conflict-prone spots such as the Niger Delta and the arid northeast, this sequence is probably playing out on a limited scale already.

II. AIM

The thrust of this paper is to examine the effects climate has change on socio-economic development in Nigeria and its threat to national security. The objective of this paper is to explore how abrupt climate change could cause disharmony in the country leading to economic and political instability, civil unrest.

III. STUDY AREA

Nigeria, with a total area of 923, 000sq km, occupies about 14% of land area in West Africa and has an estimated population of 140million (2006 Population Census). The country lies between latitudes 4° and 14° N and longitudes 3° and 15° E. It is bordered respectively in the north, east, and west by Niger, the Cameroon, and Benin Republic, while the Gulf of Guinea, an arm of the Atlantic Ocean, forms the southern border as show in figure 1 below. Most of the country comprises rocks of pre-cambrian age, mostly composed of granites and metamorphosed rocks and are generally found in the higher parts of the country while sandstones of cretaceous and Eocene times occupy the Benue, Gongola, and Middle Niger Basins. In terms of relief, the land is generally over 1500, 600, and 300 metres respectively in the east, north and west. The low-lying areas, which are generally below 300 metres, lie along the coast and along the valleys of the main rivers. The main drainage systems in Nigeria are: the Niger-Benue; the Chad, and, the coastal river systems. The main sources of the rivers include the Jos Plateau, the Western uplands, the Eastern Highlands, and the Udi Plateau. The largest river in Nigeria is the Niger, followed by the Benue, which joins the Niger at Lokoja, and rises from the Cameroonian highlands. The climate falls within the lowland humid tropics and is generally characterized by high temperature regime almost throughout the year. The mean maximum temperature is 32° C and 41° C respectively in the far south and in the north, while the mean minimum temperature is 21° C in the south and under 13oC in the north. The climate of the country varies from a very wet coastal area with annual rainfall greater than 3,500mm to the sahel region in the northwest and northeastern parts, with annual rainfall less than 600mm. The annual variation of rainfall, particularly in the northern parts, is large. This often results in climatic hazards, especially floods and droughts (Federal Min. Environment, Abuja, 2003).

Nigeria has six main vegetation zones in a south to north gradient: the Saltwater and Freshwater swamps, tropical lowland rainforests, Guinea savanna, Sudan savanna, and Sahel savanna. The distribution of vegetation has been greatly affected by land use changes during the last 100 years. The soils are broadly categorized into four groups. These are

- (a) the northern zone (sudan/sahel zone) consisting largely of sandy soils
- (b) the interior zone (Guinea zone) consisting of lateritic soils
- (c) the southern belt (high forest zone) of forest soils
- (d) the zone of alluvial soils along floodplain of rivers in the delta, and along the coast. Although crude oil is now by far the most important source of national revenue, more than 70% of the labour force is still employed in agriculture. More than 90 % of agricultural production comes from rural-based, small-scale farmers who produce their own food crops and derive income from several cash crops as well as from the sale of surplus food crops. The growth rate of agricultural production is low, between 1.4 and 4.9% with an annual average of 2.5% (Federal Min. Environment, Abuja, 2003).



Figure 1: Map of Africa showing Nigeria

Source: Wikipedia

IV. EFFECTS OF CLIMATE CHANGE ON NATIONAL SECURITY

No one can tell the full security implications of climate change for now, but studies have shown that changing weather plays an important role in violent social collapses over the centuries, from medieval China to the collapse of the Mayan civilization to the recent crises in Darfur. 40% of all the conflicts within any state in the last six decades involved disputes over limited natural resources, over thirty of them since the 90s. It worth noting here that not all these conflicts have links to climate change but disputes over resources is known to have caused most of these conflicts. Conflicts over resources is a familiar component of Nigeria's social disorder. According to one estimate, communal violence, mostly involving contest for resources, killed at least 10,000 Nigerians in less than a decade and this is strongly linked to climate change. Another case in Nigeria is the frequent farmer-fulani clash, which has to do with the contest of resources which is greatly affected by climate change. Drawing lines of causation between climate change and conflict requires caution. Every conflict has many causes, and people do not automatically start fighting when the weather heats up, their crops shrivel, or their jobs disappear. Policy analysts, the media, and academia also disagree on the magnitudes and mechanics of risk. On one side, available statistical research says the causal links between climate change and conflicts are subtle, with many contingencies. Against this nuanced view, other voices sound dire, deterministic alarms—arguing, for instance, that climate change “may well represent a challenge to international security just as dangerous— and more intractable—than the arms race between the United States and the Soviet Union during the Cold War or the proliferation of nuclear weapons among rogue states today.” It is unknown which set of views will prove more correct. These difficulties noted, there are grounds to believe Nigeria's changing climate could lead to violence. Low economic opportunity is the first conflict risk potentially relevant to Nigerian climate change. Anger over economic stagnation and joblessness turns up in opinion polls and conflict narratives across Nigeria. The power of climate change to disrupt economies and eliminate jobs needs closer study, but existing evidence suggests at least two troubling potential links to violence, both involving the young. First, climate change could increase the risk of violence in some areas where youth are especially affected. A full 60 percent of Nigeria's population and three-quarters of its unemployed are under thirty.

Evidence in and outside Nigeria suggests that alienated young people who lack resources and economic opportunity are more likely to join rebellions. In the dusty streets of Borno state's capital, for instance, the violent antiestablishment Islamic group Boko Haram attracts rafts of jobless young men, as do the Delta's many militias and gangs. Second, more jobless youth could deepen the recruitment pool for political violence. Politicians bankroll, mobilize, and manipulate much of Nigeria's worst violence, often as a survival mechanism.

Idle young men and women already provide the muscle for much of this unrest. Declining social and economic ties are a second possible conflict risk. Climate change-induced shifts in economic opportunity, for instance, could undercut existing trade relationships that act as barriers to violence, leaving mistrust, rumor, and broken agreements in their place. Two examples illustrate the problem. In the south, many farmers now plant over grazing routes long agreed upon with Fulani herders, in some cases leading to violence.

Their reasons for doing so are partly climate related: shifts in planting techniques driven by changing rains and temperature.

Migration is also something of a wild card among the climate change-induced conflict risks. Nigerians could move in anticipation of climate-related crises or flee trouble once it lands. Results again could be mixed: relocating might lessen the secondary effects of resource shortages or deepen them, both in the spots migrants leave and the places they move. Sudden influxes of migrants also can strain government's capacity to respond and encourage more divisive use of identity politics, as attested by the long history of Christian versus

Muslim and “indigene” versus “settler” killings in the migrant-heavy urban slums of Kano, Kaduna, and Bauchi. Research outside Nigeria suggests that citizenship and service delivery policies that absorb rather than ghettoize and further stress the displaced are key to avoiding conflict when migration soars.(Sanye, 2011).

V. CONCLUSION

From the above discussion almost all types of food crops in grown Nigeria is rain fed, and as such, agricultural produce all over the country is in short supply due to extreme changes in the climate which affect both subsistence and commercial

agriculture severely. Floods and increasing ocean wave's intensity, damaging of coastal towns and cities were identified to expose millions of people at vulnerable risks. Nigeria has been identified among nations that don't have the capacity to adapt in the event of abrupt climate change. Nigeria aware of the nation's vulnerability, have long supported international efforts to combat climate change and global warming being a prime mover to 1994 United Nations Convention on Climate Change (UNCCC).

RECOMMENDATIONS

Based on the above findings, the paper makes the following recommendations:

- There is need for integrated approach to development which must seek to understand the existing vulnerability and coping strategies of the local people to changes in their environment and build on them through policy formulation with adequate participation of the local people.
- A planned adaptation and effective coping strategy will reduce vulnerability to climate change and other changes in the environment.
- An in-depth understanding of how individuals, communities and natural system can prepare for and respond to changes in climate and non-climate shocks is important to reducing vulnerability to adverse changes in the environment.
- Climate change mitigation processes are underway but these are insufficient to address the problem. Nigeria government must be commit to deeper cuts in greenhouse gases in the near future.
- Climate change mitigation is not just the responsibility of governments. Business and industry must begin the transition to 'clean' technology and individuals must assess their own lifestyles and ensure that they are doing all they can to minimise their own contribution to global warming.
- Adaptation to climate change – such as disaster preparedness and mitigation - is essential to safeguarding progress made in development. It also proves cost effective.
- Climate change must be accounted for in all local and national development planning. As the IFRC states, future development decisions must be viewed through the lens of risk reduction'. Climate change intensifies the need for Nigeria government to have national policies in place that address the nation's sustainable development needs.

REFERENCES

- [1] Adejuwon JO (2006). Food security, climate variability and climate change in sub-saharan West Africa. Assessments of impacts and Adaptation to climate change (AIACC), Project No. AF 23. A final report, AIACC Project office, Washington, D.C.
- [2] Akinro AO, Opeyemi DA, Ologunagba IB (2008). Climate Change and Environmental Degradation in the Niger Delta Region of Nigeria:Its vulnerability, impacts and possible mitigations. *Research Journal of Applied Sciences*. 3 (3): 167-173.
- [3] Anyadike RNC (2009). Climate change and sustainable Development in Nigeria; conceptual and empirical issues. Enugu forum policy paper 10. African Institute for Applied Economics, Nigeria.
- [4] Apata TG, Samuel KD, Adeola AO (2009). Analysis of Climate change perception and Adaptation among Arable Food Crop Farmers in south Western Nigeria. Paper presented at the conference of International Association of Agricultural Economics pp. 2-9.
- [5] Awosika LF (1995). Impacts of global climate change and sea level rise on coastal resources and energy development in Nigeria. In: Umolu, J. C. (ed). *Global Climate Change: Impact on Energy Development*. DAMTECH Nigeria Limited, Nigeria.
- [6] Awosika LF, French GT, Nicholls RJ, Ibe CE (1992). The impact of Sea level Rise on the Coastline of Nigeria. In: Proceedings of IPCC Symposium
- [7] Butt TA, McCari BA, Angerer J, Dyke PT, Stuth JW (2005). The economic and food security of climate change. *Mali Journal Climatic change* 6(8): 355-378.

- [8] Eboh E (2009). Implications of climate change for Economic growth and sustainable Development in Nigeria. Enugu forum policy paper 10. African Institute for applied economics. Nigeria.
- [9] Efe S.I. (2008). Regionalization of Nigerian Climate. A recent Approach. *The Nigerian Academic Forum*,11(3): 24-30.
- [10] FAO, (2009). FAO and Global Environment. Adaptation of Agriculture to Climate Change.FAO Sustainable Department <http://www.fao.org>
- [11] Hansen WR, Svein Osterhus (2007), Faroe Fisheries laboratory, Faroe Islands FRS Marine Laboratory. P.O. Box 101 Aberdeen AB 119 DB U.K.
- [12] Inter governmental Panel on Climate Change (IPCC), 1996: Climate Change. The IPCC response strategies. Island Press,Washington, D.C.
- [13] International Federation of Red Cross and Red Crescent Societies (1999). World Disaster Report 1999. pp 11.
- [14] IPCC,(2007). Climate Change 2007, the Physical Science Basis. (Summary for Policy Makers).
- [15] IPCC, (2007a). Climate Change 2007. Impacts Adaptation and Vulnerability, Brussels IPCC.<http://www.ipcc.ch/about/> John, R. C (2007). Director of the Earth System Science center the University of Alabama, Hutsiville USA:
- [16] Mitchell T, Tanner T (2006). Adapting to Climate Change: Challenges and Opportunities for the Developing Community. A Publication of Tearfund, UK.
- [17] Obi NI (2001) Climate Change and Its Implcation for National Security. *Journal of Environmental Management and Safety*.3 (1):118-131.
- [18] Okali D, Eleri EO (2004). Climate Change and Nigeria: A guide for Policy Makers. The publication of the Nigerian Environmental Study Action Team (NEST).
- [19] Oladipo EO (1995). An indication of abrupt change of rainfall and it potential impact on energy development in Nigeria. In: Umolu, J. C. (ed). Global Climate Change: Impact on Energy Development. DAMTECH Nigeria Limited, Nigeria.
- [20] Onofeghara FA (1990). Nigerian Wetlands: An Overview. In: Akpata, T.V.I and Okali, D. U. U. (eds). Nigerian Wetlands pp 14-26. Man and the Biosphere (MAB) National Committee, Nigeria, UNESCO National Commission, Federal Ministry of Education.
- [21] Onyeagucha U (2000). Environmental Rights and the Constitution of the Federal Republic of Nigeria, 1999. In: The Emperor Has no Clothes. The Report of the Conference on the People of the Niger Delta and the 1999 Constitution. Environmental Rights Action/Friends of the Earth, Nigeria.
- [22] Sarah La Trobe (2002). Climate Change and Poverty: A Discussion Paper. A publication of Tearfund, UK. New Zealand Herald; April, (2007): The Reality of Global Warming; Report on Flooding of Tuvalu. New Zealand.
- [23] Pajendra P (2007). Chairman, Intergovernmental Panel on climate change (IPCC).
- [24] Sayne A (2001) Climate Change Adaptation and Conflict in Nigeria. A Special Report for United States Institute of Peace. Washington, DC. Zievogel G, Anthony Yang, Balgis Osman, Cecilia Conde,Sergio Cortes,
- [25] United Nations, (2007). United Nations Fund for Climate Change, 2007.