

Environmental Security and Infrastructural Development in Nigeria

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Abstract

Environmental degradation and infrastructural development are interdependent and interrelated variables, as they appear to feed off each other. This study aimed at investigating the nature of infrastructural development and environmental security, and especially, the extent of the interdependence between these two variables in Nigeria. The study adopted a survey research design, drawing primary data from relevant environmental agencies in Nigeria, as well as secondary data from relevant text and online sources, and subjecting these to content analysis. The findings from the study showed that the environmental security in Nigeria is threatened, and poor infrastructural development is a factor responsible for such threat. Another finding revealed a nexus between environmental security and infrastructural development, resulting from the strain of infrastructural development on the environment and vice versa. Anchored on the theory of ecological modernization, the study concluded that sustainable infrastructural development would lead to more effective management of environmental degradation and promote environmental security in Nigeria. It recommended that law enforcement and relevant agencies should ensure proper implementation of relevant environmental laws. Also, relevant authorities should ensure adequate supervision of development activities to ensure that relevant infrastructural development policies are obeyed and that there are stricter sanctions for offenders.

Key words: Environmental degradation, Infrastructural development, Security, Regulation.

Introduction

Environmental degradation and environmental insecurity are not new concepts, rather, are contemporary global concerns causing the earth to deteriorate and causing a great deal of

major consequences globally. Environmental pollution which is a cause of environmental degradation possess a major health risk not just to the biodiversity of the earth but also to human life. Exposure to particulate matter (PM) in air pollution is a major risk for premature death. Apte, Brauer, Cohen, Ezzati, and Arden Pope (2018) reported that in 2016, PM exposure reduced average global life expectancy at birth by 1 year, with reduction of 1.2-1.9 years in polluted countries of Asia and Africa.

Environmental degradation is a global security challenge that has several consequences for individuals and other life forms in the environment. Some of the major consequences of environmental degradation include; depletion of the ozone layer of the atmosphere due to the increase of level of emission of greenhouse gases into the environment, and degradation of earth's ecosystem leading to loss of natural habitats of animals and consequently endanger such species, the pollution of natural water bodies and deforestation, and increased level of toxicity of the air, which greatly impacts human health, causing respiratory diseases from increased exposure to high toxic pollutants in the air. The World Bank in 2016 reported that 94% of Nigeria's population was exposed to high damaging levels of air pollution. In the same vein, the WHO in 2017 reported that Onitsha; one of the busiest cities in South Eastern Nigeria, was the world's most air polluted city, having 30 times more level of PM (particulate matter) than the recommended level.

Deforestation, pollution, overpopulation are activities which cause a strain on the environment in Nigeria, although it can be argued that these activities or the causes of these activities are results of the efforts to promote development, especially the development of infrastructure, it is also imperative to consider the effects of such activities on the environmental security of the state and particularly for individuals as well. Infrastructural development activities have increasingly resulted in the felling of trees, encroachment on water ways, increased carbon monoxide emission from production plants, among others, which have continued to threaten the security of the environment. Approximately 70% of water in urban areas in Nigeria are polluted and several Nigerian cities – Lagos, Port-Harcourt, Onitsha – continued to suffer from varied degrees of air pollution, resulting to protest and several other vices, including kidnapping and banditry.

Evidence from observation reveal that rapid economic and infrastructural development in Nigeria are contributing factors to the growing nature of environmental degradation in the country. However, despite the establishment of agencies to ensure environmental security – Federal Environmental Protection Agency (FEPA) in 1988 and the National Environmental Standards and Regulations Enforcement Agency (NESREA) established in 2007 – and the considerably improved environmental consciousness, environmental security in Nigeria remains under threat. Hence, this study intends to explore the nature of both environmental degradation and infrastructural development and determine to what extent they influence each other, as well as the various efforts made to ensure improved environmental security in Nigeria, while also ensuring continued adequate infrastructural development.

This study adopted the descriptive survey design method, generating data largely from relevant secondary sources as journal articles, textbooks and online publications. Primary data was generated from officials in relevant environmental agencies such as the National Environmental Standards and Regulations Enforcement Agency (NESREA) and a few state

ministries of environment, using an unstructured interview guide. Primary data were transcribed, and content analyzed, along with the secondary data generated for this study.

Conceptualizing Environmental Degradation

Any attempt at conceptualizing environmental degradation without first understanding the concept of the environment would prove challenging. The World Bank (2016) defined the environment as the natural and social conditions surrounding all mankind including future generations. Bayode, Emmanuel and Sogbon (2017), preferred a more science-based definition of the environment as made up of biophysical components and processes of natural environment of land, water and air. This would also include all layers in the atmosphere, inorganic and organic matters, socio-economic components and processes of human endeavors. The elements mentioned here have a symbiotic relationship and any distortion of their natural state could affect economic activities. Emmanuel and Alakinde (2016), lending credence to the above asserted that land and associated resources, structures, sites, human health, nutrition and safety are also inclusive. The National Conservation and Environment Protection Act (2016) observed that the environment includes the physical factors of the surrounding of human beings, land, soil, water, atmosphere, climate, sound, odour, taste and the biological factors of animals and plants. The Federal Environmental Protection Agency Act (2015) also observed that the environment includes water, air, land, and all plants and human beings, or animals living there in and the interrelationships which exists among these or any of them. Essentially, and drawing from the perspectives above, the environment can justifiably be said to be the natural habitat of man with several components within which various kinds of activities and processes occur. It is particularly interesting to note the World Bank's definition of the environment as spanning the conditions of future generations, which suggests that among all the other human security concerns, environmental security arguably has considerable implications for present and future generations on a somewhat progressive scale.

Environmental degradation can be described as the abuse and deterioration of the environment resulting from human activities and leading to the depletion of resources, contamination of air, water, and soil, the destruction of the ecosystems and the extinction of flora and fauna (wildlife). Degradation of the environment could also be attributed to the negative changes in the environment resulting from socio-economic, technological, institutional and industrial activities, and consequently producing results that are undesirable for present and future generations. Several other factors affect the condition of the environment, such as urbanization, population growth, unregulated increase in agricultural activities, increase in the use of energy and transportation, deforestation among others.

Ecological Modernization Theory: A Framework of Analysis

This study is anchored on the ecological modernization theory which argues that institutions and social actors constantly attempt to integrate environmental concerns into everyday functions, development, and relationships with other actors or institutions, as well as with the natural world (Mol et al, 2009). The ecological modernization theory became

prominent in the literature in the early 1980s and has been popularized by scholars such as; Joseph Huber, Martin Janicke and Udo E. Simmons. This theory builds on a longstanding environmental development approach that recognizes the contribution of development to environmental insecurity, but also argues that sustainable development can eventually lead to an improvement in environmental security (Grossman & Krueger, 2009). The ecological modernization theory essentially argues that at the onset of development, environmental insecurity is relatively high. However, as development and affluence continues to rise, emphasis on the environmental security increases, and so also does the collective interest in improved quality of life as well as citizen's agitation for "sustainable" product and services delivery, which ultimately pressure governments and the private sector to invest in and sustain beneficial production systems and technologies. As development expands and citizen's pressure is sustained, there is likely to be an increase in sustainable infrastructural development.

The ecological modernization theory is an offshoot of the modernization theory which prescribes a particular development pattern for every society, and as states move through these steps of modernization, development occurs, as well as social and political change. This theory is suitable for this study as a result of its emphasis on concern for environmental security in the development activities of every actor and institution. It is also arguable, from the theory that environmental security and infrastructural development are mutually reinforcing, since careful and planned infrastructural development has a positive influence on environmental security, and vice versa. Mol et. al (2009) submitted that as sustainable infrastructural development increase, 'ecological rationality' and concern for environmental security would emerge and permeate the society.

Critics have argued that ecological rationality may not necessarily result in environmental security, as it is always largely dictated by the capitalist economic mode of production, which further worsens environmental insecurity (Foster, et al., 2010). Other critics argue that the theory is limited in scope, and applications cannot be done in the global context, it is more applicable with the milieu of particular states. However, justified these criticisms, they do neither diminish the globalized nature of environmental security nor do they excuse concern for environmental security in infrastructural and other development activities.

Nature and Causes of Environmental Degradation in Nigeria

Agukoronye (2015); Agbola & Agbola (2017) and Areola (2016), among other scholars, have identified many of the challenges to environmental security in Nigeria. These problems include, but are certainly not limited to, the high rate of urbanization, psychological orientation of urban residents on the environment as well as poor environmental management practices, and unfortunately, these do not come without their costs to both the citizens and the state. The World Bank put the annual loss of Nigerian natural resources to environmental degradation, assuming that no form of remedial action is taken, at US\$5 billion (World Bank, 2016). Almost every Nigerian state suffers one form of environmental challenge or the other, and in varying degrees. Describing Nigeria's environmental challenge in the words of Mr.

McNamara, a former President of the World Bank, the north eastern, north western, and north central regions of the country are literally being “blown away” by wind erosion, while the south southern, eastern and western regions are washed away into the ocean. Unfortunately, while sufficient data is necessary to determine the nature and cost of environmental degradation in Nigeria, such data are not readily available, and in fact, policies made to help salvage what is left of the environment in Nigeria continues to suffer implementation challenges. Some of the major challenges to environmental security in Nigeria are highlighted below:

Urbanization

Urbanization essentially results from high population growth rate and rural-urban migration, and in Nigeria unfortunately, this is further characterized by city slums with serious environmental and even health consequences. Urbanization, particularly in the Nigerian context, is evidence of the arguable inability of development measures to keep pace with the population growth rates. Environmental security continues to be compromised by the rapid growth of the cities and the attendant inability or unavailability of social services and infrastructures to keep pace with the growth rate. Inappropriate disposal of refuse is another concern that emanates from the excessive population growth and results in the increased generation of non-biodegradable materials. Adeniyi (2018) observed that inadequate storm drains, dumping of refuse in drainage lines and the construction of houses close to or even on the natural water channels have been shown to be responsible for the increasing cases of flood in urban areas, also some of the issues that arise from the activities highlighted above include overcrowding in unhygienic housing conditions, poor quality or unavailability of basic infrastructures and social services, such as water sewage facilities, and even lack of access routes, all of which further complicate environmental security.

Overpopulation

Population is a major factor in all environment related issues, especially because overpopulation causes a stress on the environment. Nigeria has always considered its large population size as a symbol of greatness, power and prestige; particularly because of the market it provides for economic activities and tend to resist attempts to reduce it drastically. Studies, however, have shown that rapid decline in environmental security and living conditions of individuals are largely a result of rapid increase in population. In fact, Mabogunje (2017) observed that under such a condition of overpopulation, which he referred to as ‘stressful situation’, people easily become so anxious, worrying only about what to get out of the environment for their own immediate needs and uses, without caring very much for the consequence, especially, for succeeding generations. The Nigerian National Policy on Population for Development in 2018 has also reported that the current population growth rate is contributing substantially to the degradation of the ecology of the country, as land fragmentation, over farming and over-grazing have led to soil erosion and desertification, and overcrowding has led to the spread of shanty towns and urban slums, all of which are likely to worsen if the present population growth continues.

Deforestation

Forests are a 'sanctuary' for rare and /or endangered animals. Forests also serve as storm breaks that protect towns and villages from wind, flood or other natural events; they provide useful economic products, such as wood for construction, charcoal for fuel, fiber for paper and textiles, and medicine from the bark and leaves of some plants, among others. Deforestation is a process of indiscriminately felling of trees for several purposes, without any plans for replacements. Some of the challenges for the environment that result from the felling of trees include; erosion of the soil and easy storm hits, destruction of economic crops and trees, extinction of certain animal species, increased rainfall and increased relative humidity of the atmosphere. The Food and Agricultural Organization (FAO) has estimated that Nigerians destroy about 600,000 hectares of her forest every year through careless exploitation and husbandry.

Desertification

Desertification is described as the encroachment of the desert on the land that was once fertile, and it can be induced either by natural process or by the action of man. Natural hazards, such as drought and deposit by winds, are prime factors in the desertification process. Desertification is more pronounced in the northern regions of the Nigerian state, where the Sahara Desert has significantly encroached into arable land. The Lake Chad basin, which is also located in the north of Nigeria has reportedly gone from 24,000 km² in 1963 to about 3,000 km² in 1984, and has continued to worsen, all as a result of unhealthy human activities in the environment, in fact, Usigbe (2019) reported that the Lake Chad Basin has diminished by 90% since the 1960s and this has not only led to intrastate conflicts between groups of farmers and herders who are in constant competition for diminishing water resource, but also has created increased tensions among the states bordering the basin – Chad, Niger, Nigeria and Cameroon. Although desertification can be managed through irrigation, terrace ploughing and planting of trees and grasses, a lot remains to be seen in this respect across Nigeria.

Pollution

Air or atmospheric, aquatic or water and land or surface area pollution have also remained a challenge for environmental security in Nigeria. The growth and development of industries and economic activities, and resultant increased combustion levels have led to excess carbon monoxide which have negative effects for the blood vessel and lungs. Obajimi (2018) observed that several rural towns in Nigeria that had enjoyed fresh and dry air are currently experiencing air pollution problems due to industrialization process and expansion in human activities. Water pollution is also on the rise as a result of the discharge of unwanted biological, chemical and physical, as well as solid waste materials into water bodies, making the water unsafe for human use. According to Onwioduokit (2018), most environmental problems are due to the production or consumption of goods whose waste products translate easily into pollutant. Hence, it is arguable that the growth of urbanization

and industrial development coupled with improper waste management control have greatly influenced land area pollution in Nigeria.

Nature of Sustainable Infrastructural Development in Nigeria

Infrastructural development is a social good that serves as a determinant for several other growth outcomes within the state, including economic, political as well as personal development. Despite the enormous growth potentials of the Nigerian state, infrastructural development remains a challenge. Balogun (2016:1) reported that; “Nigeria remains at the center of Sub Saharan Africa’s growth story. With a population of over 177 million and an estimated GDP of over US\$587 billion in 2015, the country has abundant natural resources including one of the largest natural gas and crude oil reserves in Africa, over 300,000 square kilometers of arable land, and significant deposits of largely untapped minerals. Strong demographic growth with an improving age mix, increased technological innovation, and fast urbanization also continue to shape the future of Nigeria”. Regardless of these arguably enviable portfolio, infrastructure continues to pose a challenge to Nigerians.

Studies have shown that there is a positive future for infrastructure development in Nigeria with spending on infrastructure estimated to grow from \$23 billion in 2013 to \$77 billion in 2025, and that investments in infrastructure will sufficiently drive economic growth, provide jobs, and deliver vital services to the country and the majority of its citizens (Balogun, 2016). This suggests that Nigeria is an attractive infrastructural investment destination, as investment opportunities exist across several sectors of the Nigerian state; from energy, urban development / real estate, and transport, to water, agriculture, healthcare, waste management, and Information Communication Technology (ICT).

Power, transportation, health care, water and waste management are other significant areas of infrastructural deficit in Nigeria. With a population of nearly 200 million, for instance, Nigeria currently generates 4,000 megawatts (MW) of electricity while South Africa total domestic electricity generation capacity is 51,309 megawatts (MW) with a population of only nearly 58 million. Despite the several efforts to improve the power sector in Nigeria, including privatization of the sector, adequate electricity supply remains a challenge. Similarly, road network and airports in Nigeria are literally not in good shape, while rail transportation is quasi-existent in less than 50% of the states in Nigeria. In fact, Balogun (2016) aptly observed that the predominant mode of transportation in Nigeria is by road, and that road transportation accounts for 80% of goods’ traffic in Nigeria, but unfortunately only 20% of the road network in the country is paved. The situation is not very different in terms of housing, healthcare, water, waste management and infrastructure.

Better detailed project planning, stronger and improved technical partnerships, the “right” equity mobilization for infrastructure projects, and innovative financing arrangements, are some of the important factors that would help fast-track development and realization of sustainable infrastructure in Nigeria.

Environmental security remains and would continue to dominate sustainable infrastructural development agenda in a developing nation like Nigeria and the world generally. Ahmed (2015) reported that infrastructural development would remain a concern as urban population continues to grow; housing, education, health, transportation will continue to be overstretched, and may deepen environmental insecurity characterized by inadequate waste disposal, air, water and land pollution, among others. Sustainable infrastructural development can be achieved through a dynamic series of actions taken to achieve human-centered development objectives, such as:

1. Meeting the basic needs and security of all people and ensuring dignity of life and protection of property.
2. Ensuring pragmatic, progressive and sustainable social development.
3. Promote sustainable patterns of trade and financial relations, which serves to engender world peace.
4. Ensure flexible political and administrative structures with the capacity for self-correction to engender authentic political development.
5. Ensure synergy between economic growth and environmental security, which improved the quality of sustainable human security.
6. Population control through family life education which makes for meaningful existence.
7. Management of environmental risks which help mitigate the incidence of natural or man-made disasters.
8. Ensure technological re-orientation that reduces ruin of environmental resources.
9. Promoting participatory decision-making in development policy making, implementation and evaluation.
10. Encouraging a self-adjusting economic system able to sustain itself amidst global and regional uncertainties.

Towards Sustainable Infrastructural Development and Environmental Security in Nigeria

It is safe to say, from the arguments above, that environmental security is threatened in Nigeria and not enough is being done by government ministries and agencies as well as private sector to help manage this lingering crisis. Worse still, indiscriminate economic, agricultural and, especially infrastructural development activities have further complicated the environmental security situation in the country, eroding any gains so far achieved in the promotion of environmental security in Nigeria. As several scholars (Agunkoronye, 2015; Balogun, 2016; Areola, 2016; and Agbola & Agbola, 2017) have noted, the various sources of environmental insecurity in Nigeria, include, but are not limited to, poor environmental management practices, the absence of proper infrastructural development planning and investment opportunities, as well as corruption, inadequate infrastructural project implementation, misappropriation of funds, lack of technical expertise amongst others.

The role of leadership and bureaucratic corruption cannot also be overemphasized in the discourse around infrastructural development in Nigeria, as the country continues to grapple with this monster of civilization. In the same vein, Nwagbara, et al.(2015) and the World Bank (2016) have rightly observed the nexus between environmental security and national security, stressing that continuous and lingering environmental degradation would not only lead to the loss of economic resources – finance, arable crops, economic trees and other properties – but may also lead to poverty and hunger in the long term. Sustainable infrastructural development is one way to promote the security of the environment in Nigeria for present and future generations, and although achieving an effective nexus between these two variables is more of a process than a destination. Below are some suggestions that could assuage these twin issues.

First, improved regulation of development activities. Developing nations like Nigeria are constantly engaged in activities that are geared towards improved economic, political, social, agricultural and infrastructural development, however, regulation of such activities is almost always far-fetched and hindered by a number of factors including inadequate training and/or technical assistance, inadequate policy making and implementation process and especially the arguable inefficiency of policy evaluation, bureaucratic corruption and leadership challenge, among others. Regulation of development activities is an imperative for sustainable infrastructural development and such regulatory functions, such as procedural frameworks, development monitoring, and determination of development thresholds that are safe for the environment, especially in the extractive and manufacturing industries – must be highly improved from what they currently are, if any progress is to be made at infrastructural development and subsequently environmental security.

Second, human capital development. The Nigerian state ought to do more in terms of investment in the training and development of its human capital, particularly those charged with development activities and environmental security. In addition, funds should be provided for infrastructural and environmental research in higher institutions and research centers, to provide the very highly necessary information that would help direct policy decisions and determine development policy outcomes in the long run. Many state ministries of environment and works are devoid of individuals with requisite research competence, and funds earmarked for research almost always never get to the researchers who need them to carry out these empirical studies, and all these have negative consequences for both infrastructural development and environmental security.

Thirdly, institutional integration. Improved synergy between infrastructural and environmental institutions would also help to greatly achieve exchange of mutual information, cooperation in the planning and execution of environmentally friendly infrastructural development projects, as well as better and more effective assessment of infrastructural and environmental risks. Ministries of works and environment remain separate ministries, arguably working at cross-purposes, and this does not allow for proper synergy of the two functions so much so that they benefit from and support each other. It is therefore recommended that the Nigerian ministries of works and environment are merged, with two

State Ministers in charge of works and environment, so as to promote the needed synergy of the two sectors.

Finally, but by no means the least, regulation of private investments. Many of the hazards on the environment in Nigeria have been a consequence of the activities of local and especially foreign private investment companies which have conducted their business with little or no recourse to the safety of the air, land and water within their business communities. The spillages in the oil-rich Niger-Delta region, the increased activities leading to desertification in the north east and western regions are all instances of half-hazard investment activities of both local and foreign private organizations, and these are bound to continue, aided by the leadership corruption that have further complicated the situation, unless there is a stern and reformative strategy that would ensure that private investment activities are very efficiently regulated and supervised, so that private companies do not hurt the environment while at the same time profiting from it. Sanctions on investments and organizations may also prove useful in ensuring compliance to regulatory policies and strategies.

Conclusion

Human security has become the new global security framework, and it is largely dependent on the environmental security as well as infrastructural development. Hence, these two variables are imperative for human security and, by extension, national security. This study has stressed the nexus and mutually reinforcing relationship that exists between environmental security and infrastructural development, as well as the efficiency of a synergy between them. The study highlighted the major land, air and water pollutions that compromise the security of the environment in Nigeria, as well as the many infrastructural challenges in Nigeria, including the inadequate power generation causing lingering poor and erratic electricity supply, poor transportation system and bad road network, inadequate health care and waste management systems, among others. While leadership and the complex nature of corruption in Nigeria have further deepened poor infrastructural and environmental situations, improved regulation of development activities, human capital development, institutional integration, and regulation of private investments are some of the ways by which the Nigerian state can ensure sustainable infrastructural development and improved environmental security for the future.

References

- Adeniyi E.O. (2018). Environmental Management and Development in Nigeria. Proceedings of a National Conference on Development and the Environment.
- Agbola, T. and Agbola, E.O. (2017). The Development of Urban and Regional Planning Legislation and their Impact on the Morphology of Nigerian Cities. *Nigerian Journal of Economics and Social Studies*, 39(1): 123-143.
- Agukoronye, O. C. (2015). Urban Poverty and Environmental Degradation in Nigerian Cities. In Mbah, H.C. et al (eds.) *Management of Environmental Problems and Hazards in Nigeria*, Hants: Ashgate Publishing Ltd, 161-170.

- Ahmed, A. (2015). Urbanisation and the Challenges of Development. *Journal of Sustainable Development in Africa* 13, (7) 210 -235.
- Apte, J.S.; Brauer, M.; Cohen, A.J.; Ezzati, M.; and Arden Pope, C. (2018). Ambient PM2.5 Reduces Global and Regional Life Expectancy. *Environmental Science & Technology Letters* 2018 5 (9), 546-551
- Balogun, A. (2016). Infrastructure development in Nigeria: Better late than never. [PwC Nigeria](https://www.lexology.com/library/detail.aspx?g=7814c253-4d29-44ac-a59a-b2aa51e0276d), March 28 2016 available at <https://www.lexology.com/library/detail.aspx?g=7814c253-4d29-44ac-a59a-b2aa51e0276d> Accessed August 21st 2020
- Bayode, O. J., Emmanuel, A. A. & Sogbon O. (2017). Environmental Implications of Oil Exploration and Exploitation in the Coastal Region of Ondo State Nigeria: A Regional Planning Appraisal. *Journal of Geography and Regional Planning*. Vol. 4 (3), pp 110 121.
- Edo, Z. (2012). The Challenges of Effective Environmental Enforcement and Compliance in Niger Delta in Nigeria. *Journal of Sustainable Development in Nigeria*, 14.
- Emmanuel, A. A & Alakinde, M. K (2016). Nature of Environmental Science. *Monograph of Department of Urban and Regional Planning*.
- Federal environmental Agency Act (2015). Cap. F. 10. Laws of the Federation of Nigeria. Federal Government of Nigeria, FGN, (2018). National Policy on Population for Development. Abuja: FGN.
- Foster, J.B.; Clark, B & York, R (2010). The Ecological Rift. *Monthly Review*. New York: USA.
- Grossman, G & Krueger, A (2009). Economic Growth and the Environment. *Quarterly Journal of Economics*, 110, 353– 377.
- Hardin, G. (2018). The Tragedy of the Commons. *Science* 162 (3859). New Series (décembre 13): 124312
- Kalu, B. (2018). Black Soot. *The Lancet Respiratory Medicine*, 6(8), 587.
- Mabogunje, A.L. (2017). *Environmental Issues and Management in Nigeria Development*. Ibadan: Evans Brothers Limited.
- Mol, A., Spaargaren, G. & Sonnenfeld, D (2009). Ecological Modernisation: Three Decades of Policy, Practice and Theoretical Reflection. Routledge: London, UK.
- National Conservation and Environmental Protection. Act No 5 of 2016.
- Nwagbara, E. Abia, R. Inyang, F & Eleje, J. (2015). Poverty, Environmental Degradation and Sustainable Development: A discourse. *Global Journal of Human Social Science, Sociology, Economics and Political Science*.
- Obajimi, M.O. (2018). Air pollution: A Threat to Healthy Living in Nigerian Rural Towns. *Proceeding of the Annual Conference of Environmental Protection Society of Nigeria*, Ilorin.

- Olson M. (2019). Dictatorship, Democracy and Development. *American Political Science Review*, 87 (3): 567–576.
- Onwuioduokit, E.A. (2018). An Alternative Approach to Efficient Pollution Control in Nigeria. *Proceedings of the Annual Conference of Environmental Protection Society of Nigeria*, Ilorin.
- Payne, R. A. (2015). Freedom and the Environment. *Journal of Democracy*, 6 (3): 415
- Usigbe, L. (2019). Drying Lake Chad Basin gives rise to crisis. *Africa Renewal*, 24 December 2019 <https://www.un.org/africarenewal/magazine/december-2019-march-2020/drying-lake-chad-basin-gives-rise-crisis> Accessed August 25th 2020
- World Bank (2016). “*Environmental Assessment sourcebook*” Washington D. C World Bank Technical Paper.
- World Health Organization (WHO) (2017). The Impact of development Policies on Health. In A. Dianna and D. Cooper (eds.) *A Review of the Life Nature*. Geneva: WHO.

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