

**ENVIRONMENTAL SECURITY THREATS AND VIOLENT CONFLICT IN
NIGERIA; THE FEDERAL CAPITAL TERRITORY IN PERSPECTIVE**

Ifiok Pius ANIEKOP

Department of Peace Studies and Conflict Resolution,
Faculty of Social Sciences
National Open University of Nigeria, Abuja.
anipius2018@gmail.com

ABSTRACT

The global concern for environmental protection is on the increase in recent times more than ever. This is partly due to the attribution of some violent conflict between communities, parties within states and between states to environmental insecurity. Consequently, there are concerted efforts globally towards the minimization of anthropogenic threats to the functional integrity of the biosphere. However, it appears that not much is done in practice to protect the environment in the Nigerian Federal Capital Territory, Abuja. Hence, this article aims at examining environmental security threats and violent conflict in FCT, Abuja. Specifically, the objective of this article is to identify the threats to environmental security in FCT and to examine the relationship between environmental security and violent conflict. As a position paper, the concept of environmental security was defined *inter alia* to mean the proper usage of environmental resources to meet the needs of the present without compromising the ability of future generations to meet their own needs. Urbanization, pollution, deforestation, urban slumps, climate change, etc were identified as environmental security threats in FCT. Based on the numerous research findings on relationships between environmental security and various forms of violent conflict and insecurity, it is submitted that environmental insecurity can ensue violent conflict in FCT if it remains unchecked. Recommendations including the following were made: that there is urgent need for massive education and enlightenment of Abuja inhabitants on environmental protection. There should be strict enforcement of the laws for environmental protection. Environmental protection should be treated as a serious security issue since its violation affects both human health, rights and peaceful coexistence.

Keywords: Environmental Security, Environmental Security Threats, Violent Conflict.

INTRODUCTION

Scholars and policy-makers have engaged in a long-running discussion about the relationship between environmental matters and various forms of conflicts and security during the past two decades (Floyd and Matthew, 2013). This discuss has drawn global attention more than ever to issues bordering environmental protection, with a key objective of preventing further damages to the ecosystems. The Nigerian government in many of her policies and legal framework on environment has also shown great concern for the protection of the environment. However, the seeming unabated violation of environmental laws and engagement in practices that destroy the environment by individuals, private and public institutions in the Nigerian Federal Capital Territory Abuja is a matter of great concern as this might lead to violent conflict in the area. This is even more worrisome considering the level of insecurity in Nigeria at the moment partly attributed to environmental devastation in some parts of the country. Indeed, the 2019 edition of Global Peace Index, placed Nigeria among the five least peaceful countries in Sub-Saharan Africa, including Democratic Republic of Congo, Central African Republic, Somalia and South Sudan (Aworinde, 2019). This absence of peace characterized by current violent conflicts and insecurity in Nigeria is partly linked to the struggles for vegetative land between farmers and herders due to desertification which has affected part of the country.

This article shall therefore examine environmental security in the Federal Capital Territory of Nigeria, Abuja and how it could engender violent conflict if unchecked. It shall proceed with the clarification of the concept of environmental security, through the identification and discussion of threats to environmental security in FCT, examination of the link between environmental security and violent conflict, recommendations and conclusion.

Environmental Security

Environmental security is one of the new non-traditional security issues that have served to deepen and broaden the concept of security as it does not only consider the security of individual states but also the security of the global environment. It refers to the relative public safety from environmental dangers caused by natural or human processes due to ignorance, accident, mismanagement or design and originating within or across national borders. Environmental security is the proactive minimization of anthropogenic threats to the functional integrity of the biosphere and thus to its interdependent human component. Ensuring environmental security means guarding against environmental degradation and depletion in order to preserve or protect human, material, and natural resources at scales ranging from global to local (Zurlini, and Muller 2008) Environmental security involves the attempts to assess the extent to which environmental changes causes violent conflict within and between countries, explain ways in which environmental changes may undermine national security, investigate ways in which wars and their preparations affect the environment and also investigates the linkages between environmental security and development issues such as poverty and human security (Ugwuanyi, 2014). Environmental security also entails the proper usages of environmental resources to meet the needs of the present without compromising the ability of future generations to meet their own needs. Environmental security enhances economic sustainability by promoting the maximization of society's well-being through the optimal and efficient use of natural and environmental resources. The security of the environment can only be guaranteed when the laws and policies for the protection of the environment is enforced and kept but an unprotective environment may lead to violent conflict. The question is, is Abuja environment like any other part of Nigeria adequately protected?

Nigeria has a total land area of 983,213 km² occupied by about 200 million people: The interaction of these millions of people with their environment has left indelible mark on the landscape. Urbanization, deforestation, desertification, over population and all kinds of pollution are some of the resultant effects of man's interaction with his environment. These

changes occur as the people attempt to acquire their seemingly endless desire for food, shelter, recreation and infrastructural facilities. Though these wants and desires contribute to the development of the country, the unwise use of the land and its resources produce negative impacts on the environment. Federal Environmental Protection Agency (FEPA) was established to control the Nigerian Environment, its resources exploitation and management. But field observation revealed that environmental degradation is growing at a rate worse than the pre-FEPA period (Omofonmwan and Osa-Edoh, (2017). However, the core environmental security threats vary by region in Nigeria. In the Niger-Delta region, oil spillage had rendered thousands of people homeless and had triggered violent conflict in demonstration of solidarity. Lagos, Delta and Edo states continue to battle with over flooding in their homes, intense draught continue to wreaked havoc on agriculture in the northern part of the country (Omofonmwan and Osa-Edoh, 2017). In the federal capital territory of Nigeria, Abuja like many other parts of Nigerian the environment is under severe threats due to human activities and in activities. The next section takes a look at the various environmental security threats in the Federal Capital Territory of Nigeria Abuja.:

Environmental security threats in Federal Capital Territory

The following has been identified as some of the key environmental security threats in FCT, Abuja.

1. Urbanisation. The physical growth of urban areas as a result of rural migration and suburban concentration into cities as been identified as a common experience of developing countries largely due to industrialization and changes in the global economy (Cohen, 2006). Urbanization is a serious environmental threat to the Federal Capital Territory of Nigerian as it is characterized by the overstretching of the environment. The increasing demand of social services and infrastructure to cope with the rate of growth worsens the condition of the environment already threatened by global warming. Urbanization in Abuja is mainly due to the unceasing movement of people from villages and other cities into the territory, changes

from agricultural occupation of its original inhabitants to business, trade and services which has altered severely the natural setting of the environment. Urbanization in Abuja is also characterized by the growth of slums in the suburb with the overcrowding of people in dirty housing conditions, construction of houses on water channels, poor sanitation, sewage and indiscriminate refuse disposal, dumping of non-biodegradable materials such as plastics into drainage lines which often increase cases of flooding. Ejaro and Abubaka (2013) observed that urbanization and the rapid population rise in Abuja within a short period is overstressing the environment already and might lead to crises in the nearest future. The study of Ade and Afolabi (2013) also show that the abuse of urban use act in Abuja due to urbanization has negative impacts on both the city and on the surrounding areas of the city and that if the growth rate is unchecked there will be shortage of resource in the city and consequential crises.

2. Pollution. Pollution is a serious environmental security threat in Abuja. Generally classified either as air pollution, water pollution, land pollution, food pollution, noise pollution or radioactive pollution, man's activities on the surface of the earth have continuously degraded the quality of the atmosphere and the entire environment. Presently in the FCT, several places that had in the past enjoyed fresh and dry air are experiencing air pollution due to urbanization, constructions and expansion in human activities. This pollution is also due to other anthropogenic activities like industries and farming activities. These activities release pollutants like carbon monoxide, carbon dioxide, oxides of nitrogen, oxides of sulphur, hydrocarbons, vapours of organic compounds, particulates, toxic metals etc which are capable of inducing a number of health hazards. It is not uncommon to see waste products often scattered on land area in some parts of Abuja partly as a result of high-rate consumption of processed food supplies gotten from shopping malls. Construction of houses on water channels. The study of Ezeamaka, Sadiq Daful, Ogbale and Anjide (2017) on some water bodies in Abuja shows high concentration of some heavy metals (Cd, Cu, Ni, Mn, Zn, and Fe) in the water and these are above the permissible limits of the NIS and WHO guidelines, which indicates serious pollution of water in the area. It was recommended that proactive measures

be taken on environmental laws in FCT and that environmental/health worker and non-governmental bodies be active in enlightenment campaigns that will alert members of the public the harm being caused to this important ecosystem.

3. Deforestation. In a place like Abuja, where, temperature stays at high degrees for the most part of the year, trees play a significant role in reducing heat for the inhabitants. Today, these trees had been felled and replaced with houses, road construction or other structures and facilities. An implication this has is the increase in heat conditions which is further exacerbated by over-crowding. Intense heat is known to pose deadly health conditions, such as, miscarriages among pregnant women, fever, fatigue, and measles among children, to mention a few. Appannagari (2017) insists that forests are main component of the biotic element of the natural environmental system and the stability of the environment and ecological balance largely depend on the status of the forests of the region concerned. It is therefore a matter of serious concern that the present economic man including Abuja inhabitants have forgotten the environment and ecological significance of natural vegetations mainly forests and grasslands and has destroyed the forests so rapidly and alarmingly that the forest areas have so significantly decreased that several serious environmental problems such as accelerated rate of soil loss through rain splash, sheet wash, rill and gully erosion, increase in the frequency and dimension of floods. The major cause of deforestation in Abuja includes conversion of forest land into agricultural land, transformation of forests into pastures, overgrazing, forest fires, lumbering, road and other infrastructures. According to Okobia and Hassan (2017), between 2008 and 2016, trees removed from the Kuje Area Council Federal Capital Territory (FCT) resulted in an arithmetic difference of 0.0283 km² (40.67%) and that this translates to an equivalent of over 9.6 tons of CO₂ that was not sequestered due to deforestation. For him this post serious challenge since an increase in tree cover provides more resistance to extreme weather and improves photosynthesis while, a

decrease in trees presents a challenge. Hence, if trend remains unchecked, the adverse effect of deforestation may be devastating in Abuja.

4. Rapid increase of Slums. The alarming increase in slum development due to the influx of rural peoples into Abuja and high cost of residential houses in the city areas is constituting a threat to the environment in the Federal Capital Territory. The Oxford Business Group (2021) noted that rapid population growth leads to a rising proliferation of informal settlements which strained infrastructure systems. The September 2018 report of Satellite Town Development Department of the Federal Capital Territory Agency showed that just 20% of the Federal Capital Territory's population lives in Abuja city centre, while the remaining 80% reside in peripheral urban areas such as Jikoyi, Gwagwalada, Karu and Dutse Alhaji. The Abuja Master Plan of 1979 which laid out the long-term urban design of the city, was guided by the vision of equal access to the city's public services and an organized distribution of residential and green spaces. However, the high rates of rural people influx into the territory has far outstripped those envisioned by the planners, with the authorities struggling to cope with expanding informal settlements as a result of inaccessible and insufficient housing supply. Indeed, Abuja's affordable housing shortfall was an estimated 600,000 units as of March 2017, with most real estate projects under development remaining unaffordable for significant sections of the population. The areas of slum have become centres of a number of environmental problems including air and water pollution due to reckless and unplanned disposal of waste. The reckless and unplanned disposal of waste results in contamination of water which causes diseases like typhoid, cholera, enteric fever and gastroenteritis. The unplanned waste dumping places and open defecation become the sites of the growth of a number of disease carriers like flies, mosquitoes etc. These causes health hazards not only in slum areas but also in other nearby places. Slums development with its attendant problems also has severe negative impact on the environment such as environmental pollution, and deforestation.

5. Municipal Solid Waste. One of the consequences of population growth and globalization is increase waste generation (Zamorano et al., 2009) and this waste generation according to Achankeng, 2003 varies between cities and city part in Africa. Olufayo & Omotosh, 2007; Gomez et al., 2009; Ogwueleka, 2009 and Zamorano et al., 2009 maintained that the issue of municipal solid waste is a matter of great concern for developing countries as it constitutes one of the greatest challenges facing environmental protection agencies in developing countries. Solid wastes are the useless and unwanted products in the solid state derived from the activities of, and discarded by society. According to Tchobanoglous (1993), municipal solid waste sources include residential, commercial, institutional, construction and demolition, municipal services excluding treatment facilities, treatment plant sites and municipal incinerators. Indeed, solid waste is one of the three major environmental problems in Nigeria, and many other developing and even the developed countries are threatened by this (Ogu, 2000; Latifah et al., 2008; Jalil, 2010). In Abuja bulk waste mainly consist of plastics, paper, glass, metal and other recyclable components. The degradable portions of the waste consist of food waste and yard waste. Proper disposal of solid waste is become environmental problem in Abuja and this according to Kadafa (2016) poses the greatest health risk facing Nigerians. The everyday person on the street of Nigeria including Abuja seems unaffected by the waste piles on the streets, around residential and nonresidential dwellings especially in the suburb. Improperly disposed solid waste has become an environmental and health hazard in areas like the suburbs of Abuja, the Federal Capital of Nigeria. It seems an issue far from the everyday person on the street, but in reality, it's a ticking time bomb just waiting to explode. The study of Kafada showed that municipal solid waste is generated daily with an average of 0.5-1.5 kg/daily per household and that it has become a health hazard which is yet to be tackled properly by the government and local authority. It is quite common to see waste in water ways, streets, storm drains, and gutters and around public places. She highlighted lack of awareness

and low perception of the populace as contributing factors to municipal solid waste management issues as well as unavailability of solid waste collection services.

6. Rapid Population Growth Uncontrolled Population Growth is a major environmental security threat in the FCT. The continued growth of urbanization, rural-urban migration as well as poor child birth control results to over concentration of people in the FCT, consequently leading to overcrowding and overburden of provided infrastructure. The high rate of the city's population growth is already contributing significantly to the degradation of the ecology. Land fragmentation, over-farming and over-grazing, have led to soil erosion and desertification. Indeed, the large migration of rural peoples in search of job to the urban areas cause serious traffic problem and environmental pollution of all kinds. According to Oxford Business Group (2021), a 2017 study undertaken by the Federal School of Surveying and the Federal Capital Development Agency, Abuja population growth was estimated at 8.32% per annum, while satellite city populations were found to be rising even more quickly, at an estimated 20% each year. The Rapid population growth can be attributed to a range of factors including better economic opportunities on offer in the territory, underinvestment in smaller towns and villages surrounding the Federal Capital Territory, and the relative safety of the area in a region affected by pockets of conflict.

7. Poverty. It is true that poverty cause damage to environment. Due to poverty the people exploit excessively the natural resources of the country for meeting their basic needs (food, fuel, shelter, employment fodder for their cattle). Poverty and need are regarded as the greatest polluters. The proponent of Sustainable Growth theory on environment, believe that when the poor of the developing countries become richer, then it will reduce pressure on the environment. For example, they will be more able and willing to pay the costs of keeping air and water clean. However, a report by The World Poverty Clock shows that Nigeria has overtaken India as the country with the most extreme poor people in the world. Nigeria is now rated as having the largest extreme poverty population (Adebayo, 2018)). This alarming increase in number persons living in extreme poverty in Nigerian Federal Capital Territory

constitute a great threat to environmental security as this has necessitated excessive exploitation of the environmental resources for meeting basic needs of food, fuel, shelter etc.

8. Violation of urban planning rules. Violation of urban planning specifications and poor enforcement of environmental laws and sanctions constitute environmental security Threats in Federal Capital Territory. Whereas there are extant environmental laws and regulations meant to protect the environment from degradation, indiscriminate constructions and buildings, adherence to the laws and its enforcement by the statutory agencies is abysmal. There seems to be little or no sanctions to violators of environmental laws and this post great danger to the environment. It is not uncommon to see buildings constructed without compliance to prescribed floor space index or floor area ratio. Sometimes people build on water way which may lead to flooding. Due to high population density and expensive life style, the rate of consumption of natural resources (e.g. water, energy, fossil fuel, forest products etc.) is very high in urban areas. There is also misuse of natural resources whose immediate compensation becomes difficult. The unabated violation of urban planning rules and over exploitation of natural resources constitute a serious threat to the environment in Abuja.

9. Climatic change. Climate change poses a severe threat to international peace and security. According to Nafiu, Taherul and Aboh (2018), the concept of climate change denotes the alteration of the environment which results from human activities, such as improper disposal of wastes, combustion of fuels, the inadequacy of forested areas, and other influential factors that increase the amount of Green House Gases (GHG) in the atmosphere. It is the alteration of the world environment as a result of direct or indirect human practices as well as the natural climate variability witnessed over comparable years; it ultimately changes the composition of the global atmosphere (Dow and Downing 2016). The leading cause of climate change is the accumulation of Green House Gases in the atmosphere (Steffen et al. 2015). These gases affect the earth's radiative balance, the population of various animal and plant species, and the

influx of the ultraviolet rays to the earth's surface (Singh 2017). Overly, when these gases are emitted to the atmosphere, they accumulate forming a blanket layer that absorbs the infrared rays from the sun as well as shield the earth from irradiating its heat. The result of all these is an increase in the earth's temperatures, which is a condition referred to as global warming and has vastly been experienced in many parts of the world. Reports on climate changes all over the world present a worrying trend on the rate of this change and the resultant effects. As a result of climate change, about 3,852 natural catastrophes have claimed the lives of more than 780,000 persons while affecting more than two billion people as property of more than \$960 billion has been lost in the process (Duran, Ergun, Keskinocak & Swann 2013). These disasters are predicted to double up in the next 10 to 15 years compounding to the risks that the world is to suffer if the high rate of climate change is not controlled. The unplanned constructions of large buildings in urban areas absorb solar radiation and, in the afternoon, these emit heat radiations increasing the climatic temperature. Climate change is already a serious environmental security threats in the Federal Capital Territory of Nigeria. The next section examines the link between environmental security and violence.

The Link Between Environmental Security and Violent Conflict

Violent conflict simply refers to the struggle over values or claims to status, power, and scarce resources, in which the aims of the groups or individuals involved are to neutralize, injure or eliminate rivals (Coser, 1956). It involves two or more parties with incompatible interests who express hostile attitudes or pursue their interests through actions that damage the other(s), using physical force to resolve competing claims or interests. Interests can diverge in many ways, such as over access to and distribution of resources e.g., territory, money, energy sources, food; control of power and participation in political decision making; identity e.g cultural, social and political communities; status or values particularly those embodied in systems of government, religion, or ideology. (Creative Associates International 1998). Violent conflict can ensue due to environmental insecurity. Urbanization and overpopulation for instance basically leads to the overstretching of the environment and scrambling for the

limited resources which may result in conflict. Indeed, violent conflicts due to natural resources struggles and the environmental changes are included among the greatest challenges in 21st-century geopolitics.

The argument that environmental insecurity may lead to violent conflict has received much attention in the environmental security literature. The study findings of Homer-Dixon (1994) showed that when scarcity of renewable resources (such as cropland and river water) interacts with harsh social effects (for example, population displacement or economic decline) it can lead to conflict. A key concept in Homer-Dixon's work on scarcity-induced environmental conflict is that of "resource capture", the idea that "environmental scarcity encourages powerful groups to capture valuable environmental resources and prompts marginal groups to migrate to ecologically sensitive areas. For him, these two processes in turn reinforce environmental scarcity and raise the potential for social instability. Similarly, Hauge and Ellingsen (2001) examine the effects of land degradation, freshwater scarcity, population density and deforestation on conflict in 1980–1992. They find that all these factors have direct and positive effects on the incidence of conflict. For Theisen (2008) a very high level of land degradation increases the risk of civil war. For him, the 'scarcity of natural resources has limited explanatory power in terms of civil violence'. The study of Raleigh and Urdal (2007) and Hendrix and Glaser (2007) showed how factors related to climate change, such as land degradation and freshwater availability, affect the likelihood of civil conflict in Africa. They find out that water scarcity significantly increases the likelihood of conflict. Hendrix and Glaser (2007) also examine the impact of short-term climatic changes (inter-annual variability in rainfall) on civil conflict onset in sub-Saharan Africa. They report that positive changes in rainfall significantly decrease the conflict risk in the following year.

Furthermore, whereas a protected environment can facilitate and enhance peace, violent conflicts due to natural resources struggles and the environmental changes as earlier stated, are included among the greatest challenges in 21st-century geopolitics. Westing (1998)

maintained that environmental degradation is a severe threat to human security and all life on earth. For him, air and water pollution, deforestation, desertification, soil erosion, etc., resulting from human activities can and do cause changes in our living conditions. He explained that environmental degradation or change can be both the cause and consequence of violent conflict. Environmental degradation and poor respect for environmental resource management, may lead to disputes within countries and between countries. And when environmental degradation is a consequence of intentional acts of warfare, it often escalates the conflict. Environmental degradation may also exacerbate a conflict that originated from other causes such as ethnic, religious tension and socio-economic inequalities. Under certain circumstances, irreparable environmental degradation or changes in the ecological systems may increase the likelihood of violent conflict eruption. For Scott (2009), environmental problems are portrayed as a security threat because they act as a catalyst for violence and war. For example, the problem of desertification can lead to fighting over access to inadequate supplies of water. This could be from local skirmishes to an internal breakdown of law and order, to terrorism or interstate conflict. Environmental problems could either be the primary cause of the conflict or may exacerbate existing socioeconomic tensions.

Again, the study of Thomas Homer-Dixon in Mexico, Pakistan, Gaza, Rwanda and South Africa showed that scarcity of renewable resources such as cropland and river water interact with harsh social effects like population displacement or economic decline to cause intrastate conflict (Homer-Dixon, 1994). He also maintained that “resource capture” the idea that “environmental scarcity encourages powerful groups to capture valuable environmental resources and prompts marginal groups to migrate to ecologically sensitive areas. These two processes in turn reinforce environmental scarcity and raise potential for social instability. Finally, the idea of climate change instigating violent conflict and insecurity is also held by many other scholars. Burke, Miguel, Satyanath, & Dykema (2009) conducted a study that established a strong historical connection between civil war incidents and temperature changes in Africa. Bushy (2007) highlighted environmental changes as a environmental security threat

because it impacts directly on human life and well-being. The United Nations Security Council (UNSC) in Murphy (1998) identified environment change as a security threat and a threat to peace. The study of Raleigh and Urdal (2007) and Hendrix and Glaser (2007) showed that water scarcity significantly increases the likelihood of conflict. They also examine the impact of short-term climatic changes (inter-annual variability in rainfall) on civil conflict onset in sub-Saharan Africa. They report that positive changes in rainfall significantly decrease the conflict risk in the following year.

CONCLUSION

Environmental security in the Federal Capital Territory of Nigeria, Abuja is under severe threats. The factors constituting threat to environmental security in FCT include urbanization, pollution, deforestation, poor waste management, urban slumps, climatic change and warming. These problems, if unchecked may result in shortage of resources and the pressure on the scarce resources might degenerate into violent conflict. Hence, the growing environmental insecurity in Federal Capital Territory needs to be addressed to avert an impending violent conflict and to enhance peacefulness in the territory. It is therefore inevitable for the Federal Capital Territory administration and its agencies on environmental protection to embark on enlightenment campaign on environmental protection and strict enforcement of extant laws on environmental protection in the Federal Capital Territory as well as engaging in other environmentally friendly activities in all the sectors of life in the Federal Capital Territory.

Recommendations

1. Massive education and enlightenment of Abuja inhabitant on environmental protection is recommended. The apparent increase in unabated human activities and inactivities which constitute threats to the environment point to a low level of awareness of environmental protection measures by the inhabitant of FCT, Abuja, hence there is urgent need for massive education and enlightenment campaign for the protection of the environment in FCT. Both in schools, in religious institutions, radio and television campaign, use of social media etc.
2. There should be strict enforcement of environmental protection laws and sanction to erring individuals or institutions as well as formulation of new policies and laws to meet the novel environmental challenges like global warming. Honest effort must be made by the statutory agencies to ensure total compliance with Abuja urban master plan
3. Rural/urban migration to the Federal Capital Territory, Abuja could be checked through provision of the basic amenities in rural areas as well as the activation of population control measures in FCT. The Satellite Towns Development Agency should as a matter of urgency wake up to its mandate to maintain a qualitative built urban environment with adequate resources and facilities to support a sustainable healthy living and economic progress of the residents of FCT.
4. Non-governmental organizations and religious institutions could be incorporated and encouraged to play active role both in the education of their followers on environmental protection and for voluntary services for the preservation of nature.
5. The provision of social amenities like light, water supply, drainage, toilet etc in all settlement including the slum areas could help reduced environmental degradation and depletion like cutting down of trees for firewood and open space defecation,
6. Environmental protection should be treated as a serious security issues since its violation affect both human health, rights and peaceful coexistence.
7. Beyond environmental impact assessment (EIA), periodic environmental due diligence assessment should be undertaken to critically examine patterns of resource

extraction in-line with extant laws and global best practices. Harmonized approach to environmental insecurity mitigation with an all-inclusive, participatory bottom-top approach is suggested.

8. . The Federal Capital Development Authority (FCDA) should explore the option of commissioning private waste management companies to handle the waste management of FCT.

9. The Ministry of FCT should develop and sustain an ingenious land policy that will encourage private property developers to build affordable housing for the lower income earners to address the issue of housing for the lower income earners. This policy could be implemented, using incentives. When implemented it will not only solve the housing issue of FCT suburb but also provide much needed revenue for the Federal capital Territory.

10. The government must go beyond the strategies and objectives of establishing Federal Environmental Protection Agencies to ensuring that environmental protection techniques are indigenized.

REFERENCES

- Ade, M.A and Afolabi, Y. D. (2013) Monitoring Urban sprawl in the Federal Capital Territory of Nigeria using remote sensing and gis techniques. *Ethiopian Journal of Environmental Studies and Management* 6 (1).
- Adebayo, B (2018) Nigeria overtakes India in extreme poverty ranking. Accessed June 02,2021 from <https://edition.cnn.com/2018/06/26/247ahaya/247ahaya247-overtakes-india-extreme-poverty-intl/index.htm>.
- Adishi, E. and Oluka, N. L. (2018). Clmate Change, Insecurity and conflict: issues and probable Roadmap for Achieving Sustainable Development Goals in Nigeria. *International Journal of Social Sciences and Management Research*, 4(8) 67-73.
- Appannagari, R. R (2017) Environmental Pollution causes and Consequences: A Study *North Asian International Research Journal of Social Science & Humanities* .3(8)
- Achankeng, E. Globalization, Urbanization and Municipal Solid Waste Management in Africa (pp. 1-22) in Africian Studies Association of Australasia and Pacific 2000 Conference Proceedings- African on a GlobalStage. 2003.

- Aworinde, T. (2019, June 16). Tobi Aworinde in Punch Newspaper published. 2019 Edition of the Global Peace Index. Retrieved from <https://punchng.com/248ahaya248-ranks-148th-onglobal-peace-index/>.
- Ayeni A. O & Olorunfemi, B. (2014). Reflections on environmental security, indigenous knowledge and the implications for sustainable development in Nigeria. *JORIND* 12 (1) 126-137. <https://www.researchgate.net/publication/281447970>
- Burke, M., Miguel, E., Satyanath, S., & Dykema, S. (2009). Warming increased the risk of civil war in Africa. *National Academy of Science of the United States of America*, 106(49).
- Bushy, J. W. (2007). *Climate Change and National Security: An Agenda for Action*” CSR32, New York: Council on Foreign Relations. New York. Retrieved 12 16, 2018, from www.cfr.org/content/publication/attachments/Climatechange_CS R32.pdf.
- Cohen, B. (2006), Urbanization in Developing Countries. *Technology in society*. 28 (1) 63-80
- Dalby, S. (2013). New Dimensions of Environmental Security. *The RUSI Journal*, 158(3), 34-43.
- Dow, K. & Downing, T.E., (2016) *The Atlas of climate change: mapping the world’s greatest challenge*. California: Univ of California Press.
- Duran, S., Ergun, Ö., Keskinocak, P. & Swann, J.L., (2013). Humanitarian logistics: advanced purchasing and pre-positioning of relief items. In *Handbook of global logistics* (pp. 447-462). Springer, New York, NY.
- Ejaro, S.P & Abubakar, A. (2013) studied the impact of rapid urbanization on sustainable development of Nyanya, Federal Capital Territory, Abuja, Nigeria. *Journal of Applied Sciences and Environmental Management* 03(02):31-44
- Ezeamaka, C.K; Sadiq Q.; Daful, M.; Ogbole, M. & Anjide, T. W. (2019) Assessment of the Current Pollution Status of Jabi Lake in the Federal Capital Territory, Abuja, Nigeria. *Indonesian Journal of Geography* 51 (3) 324-331.
- Federal Capital Development Authority, FCDA (2020). *The Abuja Story – Historical*. Retrieved from: <https://fcda.gov.ng/index.php/about-fcda/the-abuja-story-historical>.
- Flyod, R., & Mathew, R. (2013). *Environmental Security Approaches and issues*. London: Routledge.
- Gomez, G., Meneses, M., Ballinas, L. & Castells, F. (2009). Seasonal Characterization of Municipal Solid Waste (MSW) in the City of Chihuahua, Mexico. *Waste Management*, 28:2018-2024.
- Hauge, W. & Ellingsen, T. (2001): “Beyond Environmental Security: Causal Pathways to Conflict”, *Journal of Peace Research*, 33(3): 299–317.
- Hendrix, C & Glaser, S. (2007). Trends and triggers: climate, climate change and civil conflict in sub-Saharan Africa. *Political Geography*, 26: 695–715
- Homer-Dixon, T. (1991). On the Threshold: Environmental Changes as Causes of Acute Conflict. *International Security*, 16(2), 76–116. Doi:10.2307/2539061

- Homer-Dixon, T. (1994). Environmental Scarcities and Violent Conflict: Evidence from Cases. *International Security* 19(1); 5 – 40
- Homer-Dixon, T. (2001). *The Case of South Africa*. In *Environmental Conflict*, Oxford: Westview Press, 2001.
- Jalil, A. (2010). Sustainable Development in Malaysia: A Case Study on Household Waste Management. *Sustainable Development*, 3(3):91-102.
- Kadafa A.A (2016). Solid waste management practice in FCT Abuja, Nigeria. International Conference on Pollution Control & Sustainable Environment. April 25-26, 2016 Dubai, UAE. <https://www.longdom.org/proceedings/solid-waste-management-practice-in-fct-abuja-nigeria-31393.html>
- Kaplan, R. (1994, February). The Coming Anarchy: How security crime, overpopulation, tribalism and disease are rapidly destroying the social fabric of our planet. *The Atlantic Monthly*, 49.
- Kaplan, R. (1998). *The Coming Anarchy*. London: Routledge.
- Latifah, A.M., Basri, H. & Basri, A.N.E. (2008). UrusSisa : An Intelligent System for Integrated Solid Waste Management. *Journal of Sustainable Development*, 1(2)39-46.
- Liberatore, A., (2013). Climate change, security and peace: the role of the European Union. *Review of European Studies*, 5(3)83.
- Nafiu, Taherul and Aboh (2018) Climate Change and Environmental Degradation: A Serious Threat To Global Security. *European Journal of Social Science Studies*, 3 (1)
- Ogu, V.I. (2000). Private Sector Participation and Municipal Waste Management in Benin City, Nigeria. *Environment and Urbanization*, 12(2):103-117.
- Ogwueleka, T.C. (2009). Municipal Solid Waste Characteristics and Management in Nigeria. *Iran J. Environ. Health Sci. Eng*, 6(3):173-180.
- Okobia L. E, and Hassan S. M, (2017) Increase in outdoor carbon dioxide and its effects on the environment and human health in Kuje FCT Nigeria. *Environmental Health Review* 60(4)
- Olufayo, O. & Omotosh, B.J. (2007). Waste Disposal and Management in Ado-Ekiti, Nigeria. *The Social Science*, 2(2):111-115.
- Omonmwan S.I and Osa-Edoh, G.I (2017). The Challenges of Environmental Problems in Nigeria. *Journal of Human Ecology*, 23(1), 53-57.
- Oxford Business Group (2021). Rapid urbanisation in Abuja, Nigeria, drives infrastructure and real estate investment. Accessed 30th May, 2021 <https://oxfordbusinessgroup.com/overview/keys-city-rapid-urbanisation-one-ontinent%E2%80%99s-most-prosperous-cities-drives-investment-infrastructure>
- Raleigh, C & Urdal, H. (2007) Climate change, environmental degradation and armed conflict, *Political Geography*. 26 (6)74–94

- Singh, F.P (2017) Global Climate Change:The Present Scenario. American Journal of Life Sciences, 5(3)10.
- Steffen, W., Richardson, K., Rockström, J., Cornell, S.E., Fetzer, I., Bennett, E.M., Biggs, R., Carpenter, S.R., De Vries, W., De Wit, C.A. and Folke, C., (2015). Planetary boundaries: Guiding human development on a changing planet. *Science*, 34 (7).
- Swain, A. (2000), *Water scarcity as a source of crises*. Oxford: Oxford University Press.
- United Nations Environment Programme (2019). Curbing negative environmental impacts of war and armed conflict. Retrieved from: [https://unenvironment.org/news-and-stories/statement/curbing-negative-environmental-impacts-of-war and-armed-conflict](https://unenvironment.org/news-and-stories/statement/curbing-negative-environmental-impacts-of-war-and-armed-conflict).
- United Nations Framework Convention on Climate Change. (1994). UNFCCC Report. Author. Westing, A. (Ed.). (1986a). Global Resources and International Conflict: Environmental Factors in Strategic Policy and Action. Oxford, UK: Oxford University Press.
- Westing, A. (Ed.). (1986a). Global Resources and International Conflict: Environmental Factors in Strategic Policy and Action. Oxford, UK: Oxford University Press.
- Zurlini, G. and Muller, F. (2008) Environmental Security. In Sven Erik Jørgensen and Brian D. Fath (Editor-in-Chief), *Systems Ecology*. Vol. [2] of *Encyclopedia of Ecology*, 5 vols. [1350-1356] Oxford: Elsevier.