Environmental Security and Water Wars in Africa: A Reflection on Nigeria

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Abstract

Depletion of fresh water arising from climate change and exploitation of mineral resources in African countries have contributed to violent conflicts on the continent. This study seeks to unveil the link between environmental security and water wars in the oil rich Niger Delta region and shrinking Lake Chad in the North East of Nigeria as archetypes on the continent. It depends mainly on secondary data which are qualitatively presented and analyzed. The study discovers that the exploration and exploitation of oil in the Niger Delta region of Nigeria depletes fresh water due to pollution; and the shrinking of Lake Chad by climate change forces the herdsmen to migrate southward to Benue and other river plains for pasture. This leads to herdsmen/farmers' conflict. These conflicts exacerbate environmental insecurity and its inherent consequences in a cyclical manner, thereby perpetuating environmental security deficit in the country. This study therefore recommends the cleaning of oil and industrial polluted waters and the adoption of best global practices in the extractive industry across Nigeria and the continent. Besides, Nigeria must invest more in the construction of irrigation facilities; as well as evolving policies that would regenerate the Lake Chad and the grassland in the North.

Keywords: Environmental Security, Water wars, Niger Delta, Farmers/Herdsmen conflict.

Introduction

Africa is synonymous with violent conflicts and their incessant outburst in the Post-Cold War era have been attributed to the thawing of the Cold War dynamics that hitherto frozen conflict issues. Moreover, the "new wars" in Africa are mainly intra-state with genocidal tendencies and have made so many scholars to identify ethnicity and other socially and hierarchically stratified factors as well as historical foundations as the sources of the Rwandan Genocide, Burundian Civil War, and Liberian Civil War, amongst others (Daley, 2006; Kaldor, 2007; Newman, 2004). Other scholars have identified the struggle for the control and management of mineral resources as the root causes of protracted conflicts in the Democratic Republic of Congo (DR Congo), Angola, Nigeria and Sudan. Specifically, many scholars have held on to resource curse thesis to support the central role of gold, diamond and crude oil in promoting and sustaining conflicts in these states (Watts, 2004). This is done without interrogating the link between scarcities or threat of scarcity of basic psychological needs supply by natural environment to groups, and conflict in Africa. This study therefore critically seeks to fill this gap and explains the nexus between environmental security and conflict arising from access to fresh water (water wars) in Africa, using Nigeria as an archetype. Specifically, this paper dwells on the linkage between the shrinking of Lake Chad Basin, induced by climatic change/variability and drought which forced the Fulani herdsmen to migrate to Benue Basin and other parts of Southern Nigeria, and their clashes with the sedentary farming communities, as well as the pollution of Niger Delta wetland through oil exploration and exploitation, and its linkage with the Niger Delta insurgency. The study seeks to answer the question: Is there any link between freshwater scarcity and conflicts in Nigeria? Divided into six sections including the introduction, section two reviews relevant literature on environmental security and water wars in Africa, section three highlights the methodology adopted in the discourse, section four focuses in the linkage between environmental security and water war in Nigeria, and section six concludes the paper with recommendations.

Environmental Security in Africa: An overview

Environmental security centers on the roles of environment and natural resources in peace and security which include environmental causes and sustainers of conflicts, environmental recovery and post-conflict reconstruction and peace building (UNEP, 2016). Floyd (2008) traces the consolidation of environmental security as a field of discourse to the writings of Westing (1988; 1989) which focused on the detrimental impact of military activities (the pre-mission activities, the military operation itself and the withdrawal phase) on the natural environment. These writings arose from the experiences of the given the United States War in Vietnam and other theatres of Cold War contest, where environmental warfare manifested through deliberate destruction of natural environment by the use of herbicides, detonation of bombs, the use of chemical bombs/agents,

salinization of arable land or freshwater reservoirs and deliberate setting of forest on fire amongst others. The indictment of the US military led to several efforts at cleaning up environment by military establishments and the consideration of environmental protection as part of military operation, thus defense environmental security was coined to capture the new policy direction. The contradictions between preservation of environment and the imperative of secrecy in military activities generated enormous criticism and indeed scholars have agreed that global military activities and establishment are the major cause of environmental degradation, which contribute immensely to environmental insecurity (Deudney, 1990; Finger, 1991).

Other studies have examined the interconnection between conflicts and environmental security. In effect, scholars have unraveled the nexus among environmental degradation, climate change, global warming, deforestation, drought, depletion of agricultural land and water, as well as the depletion of ozone layer and the outbreak of violent conflict in the global south, as experienced in Iraq, Liberia, Sierra Leone, Angola and the Niger Delta in Nigeria (Barnes, 2005; Ellis, 1999, Conca & Dabelko, 1998; Ferreira, 2012, Ajala, 2010). Specifically, environmental scarcity or degradation may lead to forced migration and dislocation of communities which exacerbate social division and stratification into class, ethnicity and religion, and promote conflicts. Similarly, competition over resources has been a major source of conflict in the world, whereby access to, and exploitation of these resources generate conflict as was the civil war in Nigeria between 1967 and 1970. Besides, there have been several conflicts in the oil rich Niger Delta where communities fight over oil rich enclaves at one end and various groups are fighting the Nigerian state on the other over the control of resources and unfair distribution of the proceeds from the sale of crude. This is also replicated in Sudan, South Sudan, Angola and recently in Libya where warlords compete with the states for the control and management of crude oil (Brottem, 2016, Gonzalez, 2010; Ratner *et al.,* 2017). Closely related to this is the impact of these conflicts on the investment in environmental protection and preservation and conservation. Armed conflicts damage environment which is injuries to human health, flora and fauna, community livelihoods and ecosystem services.

Similarly, so many armed conflicts are financed by earnings from the exploitation of natural resources as were experience in Sierra Leone, Liberia and Angola, where timber, blood diamond, and oil provided the finance for the belligerents. The exploration of these resources and deployment of weaponry and platforms as well as the shooting of heavy military weapons and detonation of bomb generate double jeopardy to environmental protection, preservation and conservation. This is remarkable, given that about 20 civil wars since the end of the Cold War were said to be finance by illicit exploitation of natural resources and there are more than 1800 resource related conflict globally (Butsic *et al.,* 2015; UNEP, 2009; Rustad and Binningsbo (2012). Given the exponential increase in resource conflict related civil wars, the nature and structure of states where these conflict

zones are located came under scholars' enquiries since environmental scarcity has been creatively managed by other politics without societal tension leading to violent outburst. Here, the character of the state is particularly important; a representative state will receive demands from civil society and react differently when compared to another representative state such as apartheid South Africa (Percival & Homer-Dixen, 1998).

The import of this assertion lies on the democratic credentials of states, it was therefore an attempt to promote democratic peace' thesis as postulate by Western scholars. Howbeit, the prevalence of intra-state resource related conflicts in global South despite representative government as currently experience in Nigeria, Angola and DR. Congo amongst others negates this assertion, although scholars are apt to mock representative or democratic governments in Africa due to the deficit of democratic norm and practices (Okon & Esin, 2018). Nonetheless, the character of African and third world states facilitates resource related conflicts due to their fragile structure and weak normative foundations which render them incapable of impartiality in regulating relationship between individuals and groups. These states themselves are enmeshed in contradictions within the system and fail to act as an impartial arbiter on issues involving resource or environmental induce conflicts, as they are involved in the extraction of these resources and unfair distribution of its proceed among individuals and group (Obi, 2010; Ikelegbe, 2005). Moreso, most of these states are governed by corrupt leaders who compromise environmental safety for personal gains, thereby incurring the anger of groups and individuals who are marginalized in the sharing formula, especially the indigenes of the resource bearing regions and communities who bear the adverse environmental impacts of these resource exploitation (Utulu, Ogwus & Obi-Okolie, 2017; Ajodo-Adebanjo, 2017). Thus, environmental security deficits in Africa is a product of a complex interplay of historical, social-political and economic manipulations rooted in the foundation of the global capitalism, designed to favour the wellbeing and consumption of the global North at the detriment of Africans. However, the trans boundary nature of environmental insecurity, globalization and interdependence between regions have highlighted the need for cooperation.

Water War in Africa: An Overview

Water is the source of all living creatures and the sustainer of life. It is therefore a 'commons' and its availability as well as fair allocation to individual and groups within global, regional or local communities depends on the cooperation among the stakeholders. However, where there is a stress on the supply of fresh water to any community or region, scarcity ensure and conflict arises which known as 'water war' (Shiva, 2001). Water war is a conflict cause by the threat of depletion on water resource in a region or the actual struggle over water resources. It is an outcome of environmental insecurity. Historically, water war is not new to mankind, especially the pastoralist. In the Bible, Genesis 21: 25-31 recorded the violent conflict between Abraham and Abimelech over a well at the plain of Beershba and it resolution. Ancient history of Mesopotamia and current Iraq has a

narrative of conflict between Lagash and Umma over the water of Shatt al-Gharraf and the plain of Gnedena in Mesopotamia 4,500 years ago. Lagash depended so much on the river for domestic, irrigation and transportation, whereas the Umma was located at the upstream of the river and held the control, the drainage of fresh water into canal by Lagash parked the conflict which last for several generations (Pryor, 2006).

The availability of fresh water depends on the location of a community or region, population, industrial growth, and innovative technology capable of transforming hard water to portable water as well as transferring through pipe or canal to the required destination. Scholars have asserted that at towards the close of the twentieth century, global freshwater withdrawals and human population increased geometrically (Shiklomanov, 2006). The import of these assertion is that the population growth and rate of water withdrawals are increasing at the rate that may lead to global freshwater stress which may lead to global war over water resources. However, a more optimistic view by Lomberg (2001) is that the global water reserve is sufficient for mankind as long as it is better managed. The management of water within a region involves the utilization of water conservation technology, the prevention of water pollution by extractive and manufacturing companies as well as clean-up of water bodies polluted by the exploitation of resource overtime tree planting and reforestation of drought stricken or prone regions in the world (Ndehedehe, Aguta, Okwuashi & Ferreira, 2016). In spite of this assurance, Gleick and Heberger (2013) observed the increase in cases of water-related violence disputes. The increase is attributed to the improvement in data collection aided by internet and other electronic media as well as the growing tensions and disputes over limited freshwater resources. Other factors include unresolved political challenges associated with 'peak water' – the limit imposed on the availability of both renewable and non-renewable water resources such instances abound in recent links across Africa.

At the beginning of 1990s, the United Nations Children's Emergency Fund (UNICEF) reported that 40,000 children die daily and greater part of this figure is in Africa due to hunger or disease cause by water scarcity or contamination; and about 40% of the continent's population could be victims of disease from water scarcity or contamination (Starr, 1991). Water war was in the new millennium the concerned of late President Anwar Sadat of Egypt in 1979 after the peace treaty with Israel. This was directed at Ethiopia, the upstream neighbour of Egypt which control 85 percent of the source of River Nile, and Egypt draw 86% of its annual water from the Nile. Scholars have agreed that the water of Nile River is the life-wire of Egypt and strategic to its survival even when it has very little control over it (Hefny & Amer, 2005; Hassan and Rasheedy, 2007). Besides, majority of the Nile countries have low annual rainfall and depends heavily on the river for irrigation and other uses. Egypt, Sudan, Ethiopia and the countries around Lake Victoria Tanzania, Kenya, Uganda and Rwanda were estimated to require a minimum of 10 billion cubic meter of water annually at the dawn of the new millennium. Meeting these expectations were

expected to generate violent ripples, if cooperative instruments are not institutionalized to regulate states' behavior in this volatile issue (Swain, 1997). In 2012, there were cross-border and intra states disputes over water in Sudan and Egypt and separately, within both Sudan/South Sudan and Egypt over water scarcity and allocation. In Abusimbel region in Egypt, local farmers held about 200 tourists hostage to protest inadequate supply of irrigation to their farms in June 2012. Similarly, protests over drinking and irrigation water were experienced in about seven Egyptian governorates and some were violent as was in Beni Sue governorate; where one of the protesters died and many were wounded (Gleick and Heberger, 2013).

In sub-Saharan Africa, there were reports of Orma herdsmen and Pokomo farmers clash in Kenyan over water and pasture land near Tana River in 2012, with about 100-person death. In Mali, a clash between Dogon tribesmen and nomadic Fulani herders claimed more than 30 lives in May. In August, disagreement over the ownership of newly dug well in Waraq village – a suburb of lower Jubba region in Southern Sudan claimed three lives and more than five were injured. Similarly, there was a cross border tension between Uganda and Kenya when Kenyan Pokot herdsmen crossed into Uganda territory in search of water and pasture land, the conflict was only contained by the deployment of about 5,000 troops by the Ugandan government to checked the imminent violent outburst (Gleick & Heberger, 2013).

Methodology

This study adopts causal research design and utilises literature search method which help us to understand the problem more effectively (Obasi, 1999). Data were sourced from magazine, textbooks, reports from reputable institutions, scholarly journals and the internet. This research design was preferred due to its capacity to provide deep insight into causal link between factors or variables; and increases our understanding of the linkages between environmental security and water wars in Africa, specifically, the herdsmen and farmers conflict, and the Niger Delta insurgency in Nigeria. The study relied solely on secondary data which were qualitatively presented and analyzed with content analysis technique.

A Reflection on water wars in Nigeria

Skirmishes between riparian communities over access to waters and its resources are common in Nigeria, this section focuses on two prominent conflicts linked to environmental security and specifically associated with the diminishing of freshwater. These conflicts are the herdsmen/farmers crises and the Niger Delta insurgency. While, the herdsmen/farmers clashes are traced to the shrinking and variation of the Lake Chad as a

result of climate change and human activities; the Niger Delta insurgency is seen as an outcome of environmental and indeed water pollution by oil companies which generates violent response from the host communities in need of freshwater. A reflection on these conflicts is presented below

Lake Chad: Herdsmen and farmers clashes as a water war

Four riparian countries share the Lake Chad and its water resources. These countries are: Cameroon, Central African Republic (CAR) Chad and Nigeria. It has the biggest interior drainage basin in the world, covering an area of 2,500,000km^2, which is more than 8% of African continent and provides means of livelihood for more than 38 million people, with the diversity of its climate (Coe and Brikett, 2004; Nagarajan *et al.,* 2018). Lake Chad is fed and sustained by water from three major rivers; the Komadugu-Yobe River in Nigeria, the Yedsaram/Ngadda River in Cameroon and the Chari Logone River in Central African Republic which supply about 95% of the water (Ndehedehe, Agutu, Okwashi & Ferreira, 2016). Besides the Lake Chad Basin (LCB) has distinctive diversity in climate and ecological zones, such as mountains, deserts, wetlands, forests and savannas, while the North is largely desert, the South has more humidity with tropical forest (Nagarajan *et al.,* 2018, Ovie & Emma, 2011). According to the Food and Agricultural Organisation (FAO, 2009), the climate of the LCB features strong winds with high temperature, irregular rainfall pattern and high evapo-transpiration of about 2,200mm per annum and rainfall varies annually and spatially from 150mm in the North to 1,400mm in the South (Odada *et al.,* 2006). The Lake has an average depth of three meters, with an average intra-annual variation of 1 metre which is a significant variation of the surface area between seasons. Moreso, this variation has been a recurring decimal inter-annually in recent decades and throughout history, with the report of its shrinkage from about 22,000km^{2}in 1963 to 2,500km^2 in 1987 (Nagarajan *et al.,* 2016).

Several factors are attributed to the shrinking of Lake Chad. Some attribute it to the global drying trends across the West African Sahel region, and global climate change characterized by the perturbations of ocean warming which have remarkable impact on climate trends across the region (Greve *et al.,* 2014; Ndehedehe *et al.,* 2016). Such impact includes incessant drought in the LCB caused by variation in annual rainfall. Okpara *et al.,* (2015) observed after 1963, annual rainfall reduced intermittently leading to the drought of 1972 – 1975 which also coincided with the shrinking of the basin to 10,700km^2 from the 25,000km^2 level in 1963, similar drought of 1982 – 1985 led to further shrinking of the basin to 1,410km^2. Thus, climate change and variation arising from high spatial variation of rainfall lead to drought and unpredictability of water security in the region. Besides, anthropogenic factors such as the construction of dams for irrigation and hydro-power project feed into the reduction in the volume of water of the LCB. According to studies, about a third of the 95% water supply expected to flow from Chari-Logone river and 2.5% from Kamadugu/Yobe River to the LCB are diverted by construction of irrigation dams;

Yakguou-Tekele Dyke, Maga Dam, Alau Dam,Yerders Dam and Tiga Dam. These and other similar projects across these two rivers significantly reduce the water inflow into LCB and exacerbate its shrinkage occasioned by drought (Glantz, 2004; Onuoha, 2008; US Geological, 2014). The net impact of climate variation/change induce drought and anthropogenic activities is water insecurity in the region with one of the highest population growth rates in the world and depends on climate – sensitive livelihood is water related conflict and forced migration to other regions or shifts in livelihood pattern (Onuoha, 2008; Benjaminsen, 2012, UNFPA, 2018).

As observed by Gleick (2010: 332), climate change has emerged as one of the greatest reasons for forced migration and displacement of populations. Thus, the Fulani herdsmen who massively depended on LCB for the rearing of their cattle are forced to move southward from the Southern pool to other parts of Nigeria's Middle Belts where Gongola River, River Benue and others support grassland and pasture for grazing (Odoh and Chigozie, 2012). This Southward migration brings them in direct conflict with the sedentary farmers in these areas who seek to protect their crops from the ravaging cattle (Odoh and Chigozie, 2012). The outcome is the violent clashes with widespread destruction of lives and displacement of sedentary farmers across the Middle Belt and other parts of the country.

Instances of these clashes abound in December 2009; Fulani herdsmen led their cattle to a rice field in Udeni-Gida community in Nasarawa state which resulted in deadly clashes. A reprisal attack by the Fulanis from the neighbouring Kogi and Taraba States on the community led to 32 deaths and extensive destruction of the community and farms. Similar incidence in Plateau State had led to the expulsion of about 2000 Fulani herdsmen by the local communities in April, 2009 (Odoh and Chigozie, 2012:113). Similar attacks are common in Nasarawa State, as in Benue State. One of the most pronounced attack was on communities in Agatu Local Government Area of Benue State where more 100 hundred death was recorded in 2016, and the repeated attacks by the Fulani herdsmen, on Ebete community in the same local government in February 2019, where over 16 deaths were recorded in the renew conflict. About 7000 inhabitants of seven communities have been displaced by these clashes in Agatu local government (Duru, 2016; The Punch, 2019). It was indeed the incessant raid of Fulani herdsmen on community along the River Benue Basin and the inability of the Federal Government to contained the massacre in Agatu that led to the enactment of anti-open grazing law by Benue States and the defection of the current Governor – Samuel Ortom and the entire state of Assembly member from the ruling All Progressive Congress (APC) to the opposition, Peoples Democratic Party (PDP) in the run up to the 2019 General Election. Benue people felt that President Buhari government is in support of his Fulani kinsmen on the mission to take over the Benue Basin (Ali and Mohammed, 2018).

To contain these crises, the Federal Government under President Muhammadu Buhari came up two institutional frameworks and policies. The first was the National Water Resources Bill sent to the 8th National Assembly by the Executive. The essence of Bill was to guarantee 'citizens' right of access to clean water and sanitation and ensure efficient, sustainable and beneficial use of water in public interest amongst others. The proposed Bill sought to establish the National Council on Water Resources, the Nigeria Water Resources Regulatory Commission, River Basin Development Authorities, Nigeria Hydrological Services Agency and National Water Resources Institute. These institutions were to work in synergy to ensure the protection, utilisation, development, conservation, management and control of water resources in a manner that would meet the basic human needs of the present and future generations. However, this draft bill had a major flaw as it sought to centralise the administration of water resources in the hands of the Federal Government – a reminiscent of Petroleum Industry. Specifically, the provision of Part 1, item 3 of section 2 vested the right to the use, management and control of all surface water and underground water affecting more than one state together with the beds and banks therefore in the Government of the Federation (FGN, 2016:7). The import of this provision amongst other was to take over the ownership of major riverbeds, banks and basins from state government and allocate them to whichever group and purpose deem fit for government. Equally, the proposed bill also sought to taken over the management of River Basin Authorities from the component units, reminiscent of the Port Authority which has favored a section of the country, as only Lagos Sea ports are functional, others in Onne, Port Harcourt and Calabar remained dormant. These unpopular provisions led to the rejection of the bill as law makers from the Middle Belt and Southern States were suspicious of handling over their water resources to the Fulani control Federal Government who may redistribute them to their kinsmen for herding activities.

The second policy framework suggested by the Buhari's government was the establishment of Rural Grazing Areas (RUGA) in all the Senatorial Districts in the country in 2019. This was a revised version of 'Cattle colony" suggested by the former Agriculture Minister, Audu Ogbe – whereby ranches were to be established across the country by the Federal Government for the Fulani herders in order to reduce their incursion to farmland across the country. RUGA was conceived as herdsmen settlement with their families across all the senatorial districts. They were to be equipped with modern facilities such as schools, hospitals, road networks, vet clinics, markets, manufacturing facilities that will process and add value to beef and its bye products, milking parlors, abattoirs, and leather processing facilities on the gazette land by the Federal Government. Ruga settlement scheme was rejected by Nigerians of Middle Belt and Southern extractions. Principally due to lack of consultation by the Federal Government with other tiers of government and stake holders. Besides, the executive arm of government did not even consult with the legislature for approval, but conceived to implement it with executive fiat. The government started construction work on the sites of the pilot project for the settlement in some states,

notably in Benue in Ukum, Otukpo and Tarka Local Government Areas where there are abundance of water and farmland, occupied by sedentary communities (Nwabueze, 2019). Indeed, the RUGA settlement scheme is seen as an attempt to seize fertile lands along riverbeds and basins, forcefully dislocate the communities and replace them with Fulani herders who are looking for greener pasture with the shrinking and unpredictable nature of Lake Chad due to climate change and variability induced drought in recent years.

Niger Delta conflict as a water war

The Niger Delta which is made up of Akwa Ibom, Bayelsa, Rivers, Cross River, Delta, and Edo states is the largest delta and wetland in Africa and third largest wetland in the world, as it covers about 70, 000km, with about 13,329 communities and 20 million people. The region is the emptying point of River Niger and so many rivers/streams into the Atlantic Ocean and constitutes about 7.5% of the nation's land mass with estimated 400 billion barrels of crude oil reserve which has provided about 95% of Nigerian foreign exchange earnings and budgetary expenditure since 1974 (Joab-Peterside, Porter and Watls, 2012; Kuenzer, Van Bejima, Gessner and Dech, 2013; Davis, 2010; World Bank, 1995, Tamuno, 2012).

Oil was discovered in Oloibiri, Bayelsa state in 1956 and has become the major source of income for the Nigerian state, accounting for about 96% of revenue earned from export and 80% of the nation's annual revenue. Indeed, Niger Delta accounts for 8% of the Organization of Petroleum Export Countries (OPEC) total daily production and 3% of global volume, with more than 2 million bpd production (Ajodo-Adebanjoko, 2017; Mordi, 2015) the exploration and exploitation of crude oil in this region lead to environmental degradation, principally the pollution of fresh water which hitherto was the major source of potable water and means of livelihood of the people (Yakubu, 2017; Telleza, Nirmalakhandan & Gardea-Torresday, 2002; Gonzalez, 2010). The principal sources of water pollution include, drilling, oil spill/leakage, gas flaring and construction of oil related logistic facilities.

Crude oil drilling produces waste such as produce water, spent drilling mud, drilling cutting, condemned pipes and filters which contain heavy metals, organic and inorganic waste with their inherent naturally occurring radioactive materials (NORMS). These substances pollute and contaminate water bodies in the region as they seep to the underground water, contaminate it and spread to streams, wells, boreholes and other sources of water within the region (Andrade, Andrade, Costa Pereira & Dezotti, 2010; Yakuba, 2017). For instance, a study by Gbadebo etal (2010) on the waste from drilling sites of Igbokoda X and Y oil wells in Ondo state showed high content of aliphatic hydrocarbon (AH) and polycyclic aromatic hydrocarbon which were washed into water bodies by rain and other natural processes. The implication of high hydrocarbon consumption and norms substances by

both human and aquatic lives are enormous and destructive to the health of such consumers, as it could lead to cancer and other sicknesses.

Oil spillage and leakage contribute immensely to the pollution and contamination of water in the Niger Delta. According to UNDP (2006) about 3 million barrels of crude oil were spilled in the Niger Delta between 1976 and 2001 in 6,817 cases, with 69% onshore environment, 25% in the swamp and 6% on the land. Such sites include Rukpowu spill in 2003 as well as Bodo and Kira Tai communities in Ogoni land. In Bodo, the spillage leakage lasted for almost 150 days in 2008/2009, but was less severe in Kira Tai. In all cases corrosion of underside pipe were the causes of the leakages and shell Petroleum Development Company (SPDC) was the culprit and has been responsible for about 3,000 similar incidences in Ogoni and within the past 40 years which made up 40% of its global oil spillage. The net impact of these spillage and leakage is the destruction of farmland, fishpond, water wells as well as the swamps and its aquatic lives which provide food water and livelihood for the communities (Egobueze & Iyama, 2018, Yakubu, 2017).

Related to the above is gas flaring and its impaction on the waters in the Niger Delta. It is estimated that 2.5 billion feet of unwanted flammable gas arising from crude oil production is burnt annually by multinational oil companies in Niger Delta which produce about 46 billion kilowatts of heat. This increase the temperature of the region and global warming; besides it increases the temperature of the water bodies within these vicinities and alter their wellbeing in an environment where natural food-chain is essential for the survival of aquatic and other lives. In addition to the net increase of temperature, gas flaring also led to acid rain when the obnoxious gases such as nitrogen oxides, sulphuric dioxide, alkanes, alkenes, carbon monoxide and BTEX mix up with atmospheric elements and water to form rain with high acidic content. The impact of acid rain on the environment is enormous, apart from contamination of stream, pond and surface water which destroy aquatic lives, it also increases the corrosive rate of corrugated iron roofing sheet and their leaking, as well as rapid depreciation of walls and other structures in the region in comparative term (Clinton, Uyagwung & Horsefall, 2009, Utulu, Ogwus, & Obi-Okolie, 2017; Oladipupo et al, 2016; Mwiturubanu & Wyk 2010). Moreso, the laying of oil pipelines across the region and its inherent excavation activities, as well as road and other construction activities generate grease, condemned oil and other consumables from heavy machines increase deforestation and pollution of streams, ponds, and the entire wetland. The sum of these realities was captured by Obi (2010) when he observed that the Niger Delta region is one of the five most petroleum polluted environment in the world, as the rivers, streams and ponds have been polluted for about two decades by oil spills, wastewater and dumped drilling waste. The pollutants have adverse effect on the survival of the oil-bearing communities who depends on the offshore and onshore fishing for their livelihood. According to Amnesty International (2009), pollutant kills fish, their larval, and their food chain as well as their capacity to reproduce, with inherent implication of

diminishing in stock; pollutants, similarly destroy the mangroves in the region which serve as the breeding ground for fish and other aquatic lives.

For instance, Batan (2002) studied oil spills in Warri South Local Government Area of Delta State. The K-Dere and Bodo 2008/2009 oil spills in Ogoni land, River State; and Oruma-Yibama in Ogbia Local Government Area of Balyelsa state have few things in common. The culprit was SPDC and spillages killed shell fish, pollute rivers, stream and fish bonds built by indigenes, destroy their sources of drinking water and perpetuate poverty. It is therefore the unemployment induce poverty generated by exploration and exploitation of oil resources by MNC and the Nigerian state, and their unwillingness to keep to the best environmental practices as obtain from other parts of the world that threaten the survival and security of the indigenous communities and propel them to violent protest which manifests as the Niger Delta insurgency (Ikelegbe, 2005; Ebegbulem, Ekpe & Adejumo, 2013; Amnesty International, 2009). In other words, the root of Niger Delta conflict lies in the local communities' reaction to the current methods of oil explosion and exploration which threatens their survival and livelihood (Ibeanu, 2000). Between May 10, 2006, and April 19, 2010, the Movement for the Emancipation of Niger Delta (MEND) carried out over 40 attacks in several locations in Rivers State, which was replicated by Egbesu Boys of Africa, Niger Delta Volunteer Force (NDVF) and Niger Delta Avenger (NDA) in other locations across the region (Egobueze, 2013). These groups engaged in insurgency and succeeded in crippling crude production. Consequently, Nigeria's crude production dropped to less 1 million bpd at the peak of their attack. The use of force failed the Nigerian state and pressure from global community led to policy change by President Musa Yar' Adua in 2009 who introduced the Amnesty Program to assuage the militants and facilitate disarmament, demobilization, rehabilitation and reintegration of the combatants through various trainings, skills acquisition and empowerment. The Nigerian state created the Ministry of Niger Delta Affairs and the Niger Delta Development Commission (NDDC) to oversee the implementation of developmental projects in the region. These policy initiatives were accepted and violent attacks stopped momentarily between 2010 and 2015.

However, there is a resurgence of militancy in the region since the first term of Buhari administration which illustrates the failure of the Amnesty Programme and other initiative. Amnesty Policy supposed to be a means to facilitate ceasefire and mobbing up of arms from the combatant, for peaceful dialogue on the root cause of the conflict. However, the Nigerian government erroneously sees it as an end to itself which has boomerang. It has not only empowered the militant, with resources but also sharpened their skills in submarine sabotage of pipeline and other operations. This is evidenced by the emergence of new, violent groups such as the Red Egbesu, Water Lion, Joint Niger Delta Liberation Force (JNDLF) the Adaka Boro Avengers, the Reformed Niger Delta Avengers (RNDA) and the Niger Delta Red Squad (NDRS) in 2016 (Ajedo-Adebanjoko, 2017). These groups are mere changes of nomenclature of former militant groups and are better equipped to

challenge the Nigerian state and oil companies operating in the region on the pollution of environment which has threatened the availability of fresh water and its resources for their livelihood, survival and security. Indeed, the continuous agitation for fiscal federalism by the Niger Deltans is rooted in the need to manage the resources of their region in a sustainable manner since they need healthy environment and its water resources for survival when the oil wells dry up or innovations in global energy sector render fossil fuel less attractive.

Conclusion

Environmental security has been essential for the survival of human beings through ages, as environment provides all the resources required for the wellbeing of individuals and groups; therefore, environmental security arising from the scarcity of fresh water is at the root cause of some conflicts/wars in Africa, and indeed Nigeria. This study reveals that beneath ethno-regional and religious sentiments in herdsmen/farmer clashes and Niger Delta insurgency lie the battle over freshwater needed for survival. Climate variability and change in the LCB region orchestrated by global warming led to incessant drought and shrinking of Lake Chad which forced the Fulani herdsmen to migrate southward is the root cause of their clashes with farmers. Similarly, the pollution of creek, rivers, ponds, stream and the entire wetland of Niger Delta through oil exploration and exploitation contaminate the waters and destroys the sources of survival, livelihood and security of the region led to the violent protest and insurgency threatening the Nigerian state. Resolving the conflict therefore require pragmatic policies such as investing more in environmental security through the creation of artificial lakes in some areas in the North where excess water from River Niger and Benue could be channeled to, for reforestation and creation of ranches around these lakes. Besides, the Nigerian state needs to look into the agitation of fiscal federalism, so that the wetland of Niger Delta and its resources is managed in an environmentally friendly manner. Furthermore, the domestication of the International Labor Organization Convention No. 169 as done by Chile, which mandates investors to secure the approval of aborigines and local people over projects and investments that have impacts on their communities is important. It should also compel all entities investing in the country to be signatory to 'Equatorial Principles' in order to enforce thorough Environmental Impact Assessment before projects are executed. These measures would reduce environmental insecurity and its inherent conflicts.

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