



Flood In Nigeria: Beyond Relief Materials

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ABSTRACT: *The paper examines flood in Nigeria and the need to adopt a more practicable and permanent solution to flood in Nigeria. The paper is of the view that the Nigerian state should move beyond mere provision of relief materials to consciously and proactively curbing the menace of flood in Nigeria. The paper argues that curbing the menace of flood in Nigeria would require restructuring and reactivation of institutional framework in the control and prevention of flood in Nigeria. The paper recommends that the Nigerian state through the concerned institution must be proactive and take early warning signals seriously. In addition, the formulation and implementation of Environmental Policy on Flood and Erosion should be products of unbreakable synergy among the Nigerian state, oil companies, non-governmental organization and the people.*

Keywords: *Flood, Relief Materials, Nigerian State, Proactive, Institutional Framework.*

I. INTRODUCTION

The later part of the year, 2012 saw a debacle of unprecedented flood in Nigeria. The trauma, stress, discomfort and even death caused by the flood jolted the federal government of Nigeria to take affirmative action for the affected states. The sum of ₦35 billion naira was released by the federal government of Nigeria to be shared among the affected states based on the severity of the flood. The flood incidentally led to the creation of emergency relief camps which made the people to become “refugees” in their own land. State government, oil companies, donor agencies and public spirited individuals donated relief materials in cash and kind to the ‘refugees’ to cushion the effects of the flood on the people. Whereas relief materials have alleviated the suffering of the victims of flood in Nigeria, there is the need to take proactive and precautionary measures to curb if not totally eliminate flood in Nigeria. It is against this backdrop that the paper takes an introspective view of flood in Nigeria in order to come up with measures that can forestall further occurrence.

Flood In Nigeria

Flood is a human-induced disaster that has not only devastated the environment but also destroyed lives and property. Flood is the overflow of water as a result of the inability of water receptacles such as rivers, ponds, soil, dam, the atmosphere through evaporation, to absorb the available water. This condition naturally forces water to ‘look’ for strange receptacles where it can be accommodated. In most cases, flood is caused by torrential rainfall which makes excess water available beyond the carrying capacity of the water receptacles. The torrential rainfall is a precipitate of the rising global warming prompted by indiscriminate pollution of the atmosphere. The brazen discharge of chlorofluorocarbon (CFC), carbon dioxide (CO₂) methane and nitrogen oxides into the atmosphere as a result of unfriendly environmental practices constitute the latent cause of flood. Such unfriendly environmental practices like excessive industrial discharge, gas flaring, indiscriminate dumping of refuse, blocking of water ways, poor drainage system, deforestation and bush burning constitute a serious threat to the environment and by extension human survival. According to Etuonovbe (2011), “flood is an extreme weather event naturally caused by rising global temperature which results in heavy downpour, thermal expansion of the ocean and glacier melt which in turn result in rise in sea level, thereby causing salt water to inundate coastal lands”. Flood can also be caused by burst water main, dam burst levee failures and dam spills (Etuonovbe, 2011).

In Nigeria, flood occur in the following forms like coastal flooding, river flooding, flash floods, urban flooding, dam burst levee failures and dam spills (Etuonovbe, 2011). In the words of Etuonovbe (2011), “coastal flooding occurs in the low-lying belt of mangrove and fresh water swamps along the coast; river flooding occurs in the flood plains of the larger rivers; flash floods are associated with rivers in the inland areas where sudden heavy rains can change them into destructive torrents within a short period. Urban flooding occur in towns located on flat or low lying terrain especially where little or no provision has been made for surface drainage, or

where existing drainage has been blocked with municipal waste, refuse and eroded soil sediments (Etuonovbe, 2011).

Nigeria is a country in Africa endowed with rich human and natural resources. Nigeria is located between latitude 4⁰N to 14⁰N and longitude 3⁰E to 15⁰E (Etuonovbe, 2011). It has a land extent of about 1,450-km and a west-east breadth of about 800km (Etuonovbe, 2011). Nigeria is a plural society with different ethnic groups that constitute the federation. The climate in Nigeria is characterized by annual rainfall and relatively high temperatures. At the coastal areas the annual rainfall is over 3,800 mm while at extreme north-east of the country it is 650mm (Etuonovbe, 2011). In Nigeria, the annual maximum of the temperature varies from 35⁰C in the north to 31⁰C in the south while the average annual minimum is 23⁰C in the south to 18⁰C in the north (Etuonovbe, 2011). On the Jos plateau and the eastern high lands, altitude makes for relatively lower temperatures, with the maximum no more than 28⁰C and the minimum sometimes as low as 14⁰C (Etuonovbe, 2011).

On a general note, temperature in Nigeria is relatively high especially in the northern part of the country. According to Etuonovbe (2011), “the effect of these high temperatures is high evapo-transpiration and this eventually brings about water shortage for arable cropping”. However, technically speaking, giving the high temperatures, coupled with the increasing global warming, there will be distortions in the climatic conditions which can lead to heavy rainfall. The heavy rainfall may occur at periods when it is not expected. Aside from the incidence of flooding, it leaves the farmer at lost on when to start planting and this may adversely affect agricultural productivity.

The point is that the emission of green house gases like CO₂, hydro fluorocarbon, methane gas and nitrogen oxides into the atmosphere depletes the ozone layer mainly through industrial activities and gas flaring. The depletion of the ozone layer exposes the earth to excessive heat as a result of high temperature which is referred to as global warming. Global warming leads to high evaporation which increases the water content of the atmosphere (humidity) which in turn leads to heavy rainfall. Heavy rainfall leads to increase in water run off and when the runoff is above the carrying capacity of the water receptacles, flood occurs. To corroborate this fact, Bariweni, Tawari and Abowei (2012) noted that “flood occurs when ponds, lakes, river beds, soil and vegetation cannot absorb all the water. Water runs off the land in quantities that cannot be carried within stream channels or retained in natural ponds, lakes and man made reservoirs”. (See also Okafor, 2011).

It is evident that apart from high temperatures and industrial pollution, gas is flared in Nigeria and these incidents make Nigeria to be more vulnerable to flood. According to Wami, 2006, Okowa, 2007 in (Alapiki, 2008) up till 1997, Nigeria was still flaring gas as much as 73.0 percent of its gas production, which was the highest in the world. Surprisingly, even with the huge investment in the Nigerian Liquefied Natural Gas (NLNG), gas is still being flared in Nigeria up till this moment of carrying out this study. The common sight of flow station where gas is flared in the Niger Delta region of Nigeria are the Agbada and Adibawa flow stations in Rivers State, Otuaamara flow station in Delta State, Opolo Epie in Bayelsa State. The susceptibility of Nigeria to flood is exacerbated by other unfriendly environmental practices such as bush burning, excessive deforestation, indiscriminate dumping of refuse and construction activities which in most cases block water ways and drainage system; and lack of, or poor drainage system and urban congestion.

In addition to these unfriendly practices is the increasing population growth of Nigeria. According to Etuonovbe (2011), at the census of November 1991, Nigeria had 88, 54,501 inhabitants and a population density of 95.8 inhabitants per sq.km. The average annual growth rate between 1963 and 1991 is 1.7%. The 2006 census figures indicate that Nigeria has a population of 140 million people (Etuonovbe, 2011). Apart from faster depletion of natural resources, high population growth rate leads to congestion which can reinforce, most of the unfriendly environmental practices earlier mentioned. To underscore the point on high population growth rate, Santra, (2001) noted that world population has increased considerably (6 billion in 2010) and this has increased build density and consequently there is increase in the number of natural disasters. (See also Ehiorobo and Izinyon, 2011). From the above facts, it is obvious that almost if not all the factors that cause flood is man-made. Apart from the fact that rainfall is natural, human activities to a very large extent cause flood. Thus, it may be skeptical to continue to classify flood as a natural disaster. On the other hand, it is a man-made disaster.

Flood is a threat to human survival, aside from the devastation of the environment, flood leads to the destruction of lives and property. Kolawole, Olayemi and Ajayi (2011) noted that “from 1971 to 1995, floods affected more than 1.5 billion people, or 100 million a year; of those, 318,000 people were killed and more than 81 million people left homeless”. In Nigeria, flood has destroyed lives and property. For instance, it has been noted that severe flooding in the Niger Delta has become more frequent with flood wiping out crops and disrupting traditional farming practices (Best and Lawson, 2008; cited in Aletan A. Martins O. and Idowu D.A. (2011). It has been noted that at least 102 people are now thought to have been killed by floods in and around the south-western Nigerian city of Ibadan. Flood took a deadly toll in north-eastern Nigeria in August 2011 and torrential rains pushed rivers over their banks, collapsed mud houses and washed away livestock.

According to Etuonovbe (2011), it was reported that in the northern state of Sokoto, Nigeria in September, 2010, flooding in a place called Kagara which is a small village near Goronyo town worsened significantly. The houses of the inhabitants, their crops and their storage of flood were completely destroyed. The flood led to the loss of thousands of houses and farm lands in 11 local government areas of the state. Other areas affected by the disaster include-Isa, Kebbe, Sokoto-north and Sokoto-south, Rabah, Binji, Goronyo, Silame, Shagari and Kwara local government councils (Etuonovbe, 2011). Unconfirmed reports put the death toll at 49 while about 50 villages were submerged and more than 130,000 people displaced (Etuonovbe, 2011). Furthermore, in what looks like wild fire, about 90 communities in Kogi State, particularly in Lokoja, Ibaji and Kogi local government areas of the state were sacked by the raging flood which displaced over 500,000 people (Etuonovbe 2011), in some areas, only farmlands were affected while in others both houses and farmlands were all swept away. Bayelsa State was also affected. Flood sacked over, 5,000 people in two communities in Sagbama and Kolokuma/Opokuma Local Government Areas of the State. The flood which occurred as a result of the overflow of River Nun affected Okorozi community in Sagbama and Odi in Kolokuma/Opokuma local government areas. In Olorobi community, many homes were affected, forcing them to paddle their canoes to neighbouring communities in search of refuge (Etuonovbe, 2011). The list appears to be endless. The fact is that flood is a major environmental problem in Nigeria.

The State Ad Flood In Nigeria

In a bid to stem the menace of flood in Nigeria, the Nigerian state took measures to ensure the protection of the environment and by extension, lives and property. It will be expedient at this point to understand what the state is and its primacy in the task of protecting the environment, lives and property. The state is a political organization conferred with the authority to make laws, decisions, formulate public policies and implement same in order to facilitate a mutually beneficial peaceful, egalitarian and conducive society. Consequently, in tandem with the Aristotelian teleology, the state is the highest form of development of society where individual potential can be achieved. In affirming the sacrosanct nature and its importance in ordering society, Hegel sees the state as “the March of god on earth (Guaba, 1981; 124).

The state is a symbol of authority and coordinates human activities in order to ensure peaceful, just and egalitarian society. Thus, the state through its government formulates and implements public policies and programmes that are people oriented. As a follow up, the states exist for the interest of the people and those who occupy institutions of the state must act in conformity with the ‘general will’ of the people. (Hadenius, 2010, see also IDEA 2010 and Wonah 2010). The state those not exist in a vacuum but its character and nature can be better appreciated within the purview of the behaviour of those who occupy its institutions. In order to curb the menace of flood and protect the environment in Nigeria, the Nigerian state among other efforts formulated the National Erosion and Flood Control Policy. Obasanjo (2005) in his preface to the National Policy on Erosion and Flood Control succinctly captured the mind of the Policy when he said that:

The National Policy on Erosion and Flood Control is intended to coordinate and promote programmes that would lead to the eventual minimization of soil erosion and flood hazards. It would encourage a planning process for accessing the effects of, and studying and evaluating ways to control or lessen the impact of erosion and flood, and to restore areas adversely affected by such hazards. The National Policy will also encourage and assist states to develop and implement soil erosion and flood control programmes. In states that have existing institutions for managing aspects of these hazards, the national effort is intended to complement and strengthen these efforts. Furthermore, Obasanjo, (2005) observed that the National Policy on Erosion and Flood Control advocates a proactive approach in the management of our river systems to reduce the potential flooding in the future and to design our recovery efforts following flood events. Unfortunately, apart from other erosion and flood incidents, the devastating 2012 flood in Nigeria happened seven years after the National Erosion and Flood Control Policy was formulated. The question then is, why is it that the National Policy on Erosion and Flood Control could not reduce the potential for flood in Nigeria? At the level of institutional arrangement, the Nigerian state established the Federal Environmental Protection Agency (FEPA) now National Environmental Standards and Regulations Enforcement Agency (NESREA).

NESREA was established by the Federal Government in line with section 20 of the 1999 constitution of the Federal Republic of Nigeria. It has responsibility for the protection and development of the environment, biodiversity conservation and sustainable development of Nigeria’s natural resources in general and environmental technology including coordination. In addition to NESREA, Ministries of Environment were created at the federal and state levels as partners in the protection of the environment. In spite of these efforts made by the Nigerian state, flood is still threatening the environment and human survival in Nigeria. The reason for this inefficacy of these efforts made to curb flood in Nigeria can be attributed to the character and nature of the Nigerian state. Aside from the undemocratic Nigerian state arising from electoral irregularities, (Oddih, 2007), there is lack of political will to take decisive actions, lip service (i.e inability to match words with action), corruption, fire brigade approach and toothless bulldog-like-institutional arrangements.

Electoral irregularities deny the people the opportunity to elect their leaders. Leaders that emerge from the debris of electoral irregularities may not be responsible and responsive to the yearnings and aspirations (felt needs) of the people. Thus, public policy like that on Erosion and Flood Control will merely be routine exercise of government or the state without any appreciable positive impact on the environment and by extension lives and property of the people. There is therefore the possibility that the people are grossly alienated in the formulation and implementation of the Public Policy on Environment. (Ujo, 2011). For instance, it was recorded by Kio and Ogirigiri (1990) that soil conservation and erosion control efforts at Udi were successful because of the full cooperation of the local community. The same scheme failed and was abandoned at Agulu because of the unwillingness of local farmers to adopt the new farming methods.

Political actors in Nigeria seem to lack the political will to carry out decisive actions on public policies and programmes, thereby paying lip service to them. Corruption is also a bane of the environmental policies. It has been observed that in some quarters, state projects are sometimes built without regard to existing environmental regulations because some officials are getting percentages from the contracting firms (Arukoyu and Ibani, 2004). The Nigerian state in most cases adopts fire brigade approach in tackling flood in Nigeria. Pre-flood intervention arrangements are either not made or are poorly executed. Thus, rather than being proactive, Nigerian government or state wait until flood occurs. The institutions created to protect the environment from environmental hazards are like toothless bulldogs. It is a surprise that NESREA, one of the institutions created to protect the environment does not have any control on the activities of oil companies in Nigeria. Little wonder why gas is excessively flared in Nigeria. Whereas gas is flared in Nigeria with its concomitant negative consequences on the environment, the inability of the multibillion naira Nigerian Liquefied Natural Gas (NLNG) to domesticate the gas for industrial and domestic usage not only demonstrates ineptitude, lack of political will and patriotism, but also high level of infidelity in the implementation of environmental policies, particularly the National Policy on Erosion and Flood Control.

The Economic Implications Of Flood And Relief Materials In Nigeria

Flood is like an “ill wind that blows nobody any good”. It destroys lives and property, arable land for agricultural activities and human habitation. The destruction of lives by flood means that the affected area is depopulated and this has grave consequences on the labour force, especially when lives destroyed are within the productive age bracket. The effect is that the level of agricultural productivity will be adversely affected. Although, scientific and technological advancement seem to prove it wrong but we need human beings alive to drive the wheel of scientific and technological advancement. Low agricultural productivity as a result of the destruction of the labour force can lead to starvation and eventually increase in the number of death. Again, flood can occur in farm where crops are submerged and suffocated to death, thereby leading to low food production. In another perspective, flood destroys property which was acquired over the years. The replacement of the property would mean using a greater chunk of one's income that would have been useful in other economic and more beneficial ventures. In most cases, replacement is not possible and this can make life more miserable for the people. It is on record that during the 2012 flood, the section of the east-west road linking Bayelsa State and Rivers State in Nigeria was cut off by the flood. This incident disrupted free transaction of economic activities. In most cases, markets, banks and industrial areas were submerged by flood, thereby paralyzing economic activities.

During the 2012 flood in Nigeria, some communities in most of the states like Rivers, Bayelsa, Delta, Edo, Lagos, Oyo, Kebbi, Sokoto, Kogi, Cross River, Anambra, Kwara were sacked by the flood. The people in the affected communities were internally displaced and were forced to stay in camps. The people became strangers in their own land. In what looks like an affirmative action, the federal government of Nigeria doled out the sum of thirty-five billion (₦35, billion) and shared the money among the affected states according to the level of severity of the flood. The money was meant to provide relief materials to the internally displaced persons (IDPs) in the camp. Apart from this money, the affected state government, corporate organizations and public spirited individuals also donated cash and other relief materials worth millions of naira. The economic implication is that the money used for the acquisition of relief materials would have been ploughed into economic ventures that would have had multiplier effect on the economy. This investment would have expanded the productive base of the economy thereby facilitating autarky. However, the organic materials and minerals deposited by the river water keep the soil fertile and productive (Abowei and Sikoki, 2005) in Bariweri, Tawari and Abowei, 2012). But we make bold to say that the timing of the flood is important in this regard. If the flood occurs when the crops have been planted, then the mineral and organic deposit will not be beneficial to the crops and the farmer as the crops would have been suffocated. It was also observed that the increase in the water level of a river makes catching fish easier as more fishes tried to swim ashore and hunters also benefit as their traps caught more animals chased by flood (Etuonovbe, 2011). In spite of these benefits of flood, the devastating negative effect of flood far outweighs the benefits.

Preventive And Mitigating Measures

It is obvious that flood is caused by human activities. For instance, the pollution of the atmosphere through industrial activities, gas flaring, bush burning, combustion engines lead to temperature rise (which is now known as global warming). Global warming leads to the depletion of ozone layer and consequently high temperature. The high temperature in turn leads to high evaporation which increases the humidity of the atmosphere and eventually leads to torrential rainfall. Torrential rainfall, given the inadequacy of natural and man-made water receptacle can lead to flood. Other unfriendly environmental practice such as deforestation, blocking of water ways through indiscriminate dumping of refuse and construction activities, and drain failure can also cause flood. From the foregoing, it becomes expedient that laws regulating human activities on the environment must not only be made but also strictly enforced, effective institutional arrangement that can guarantee the enforcement of the environmental laws and facilitate the participation of the people in the formulation and implementation of environmental law particularly that of erosion and flood must be put in place. The state should be a precipitate of the democratic values and be responsive and responsible to the felt needs of the people. The state should demonstrate or exercise the political will to protect the environment from the harsh activities of man. There should be effective strategy to forecast the weather and promptly disseminate early warning signals. The growth rate of the population should be monitored to avoid over population that may lead to high population density and congestion, the higher the population density, the higher the vulnerability to flood. There is the need to be proactive (ie take action before the flood comes). Designated camps should be built and managed by the government to avoid fire brigade approach when flood occurs. There is also the need to carryout intensive and extensive campaign to sensitize the people on the need to be environment friendly. Environment base-organizations should be formed at local, state and national levels. Corporate organizations should be supportive and the media houses should be alive to their responsibility in educating the people on the need to protect the environment.

II. CONCLUSION

Flood is a threat to human existence and survival. It is caused by human activities and can be prevented or curbed by regulating human activities through the promulgation and enforcement of laws on the environment. The state should be a product of democracy in which case the people decide who their leaders should be through free and fair electoral processes. This would make the leaders and indeed the state to be transparent, answerable to the people and be responsive and responsible to the yearnings and aspirations of the people. The democratization of the state in Nigeria would not only make the leaders to be a live to their responsibilities but also ensure that the people through the institutions of the state participate in the formulation and implementation of public policies and laws, particularly the Erosion and Flood Control Policy. The Nigerian state should be proactive and avoid fire brigade approach to flood. The Nigerian state should therefore move beyond mere provision of relief materials to flood victims by adopting and implementing measures that can prevent or curb the occurrence of flood in Nigeria.

REFERENCES

- [1]. Alapiki, H.E. (2008). The State, Oil Resource Conflicts and the Niger Delta Question in Nigeria: the Options to Peace and Development; Social Science Study Group Series. No.12
- [2]. Alapiki, H.E. (2010): Politics and Governance in Nigeria. Port Harcourt, Nigeria David Stones Publishers Ltd.
- [3]. Aletan, A., Martins, O. and Idowu, O.A. (2011). Mitigating the Effects of Floods and Erosion in the Niger South Catchment Area through Integrated Flood Management (IFM); Proceedings of the Environmental Management Conference, Federal University of Agriculture, Abeokuta, Nigeria.
- [4]. Altahiru Jega and Okechukwu Ibeanu (eds). A Publication of the National Political Science Association.
- [5]. Arokoyu, S.B. and Ibani, B.G. (2004). Environmental Regulations and the Nigerian Environment: focus on Federal Environmental Protection Agency (FEPA); JOGET Vol.6 No.1&2
- [6]. Babatunde, Abdulfatah (2011). Evolving Efficient flood Management Strategy in Nigeria.
- [7]. Bariweri, P.A, Tawari, C.C. and Abowei, J.F.N. (2012). Some Delta Environmental Effects of Flooding in the Niger Delta Region of Nigeria; International Journal of Fisheries and Aquatic Science.
- [8]. Ehiorobo, Jacob O. Izinyon, Osadolor. C. (2011): Measurements and Documentation for Flood and Erosion Monitoring and Control in the Niger Delta States of Nigeria ()
- [9]. Etuonovbe, A.K. (2011). The Devastating Effect of Flooding in Nigeria. www.fig.net/pub/fig2011/papers/tsoj/etuonorbe8002pdf.
- [10]. Guaba, O.P. (1981). An Introduction to Political Theory New Delhi. Macmillan India Limited.
- [11]. Hadenius, A. (1992). Democracy and Development Cambridge University Press.
- [12]. Human Development Report Nigeria (2008-2009). Achieving Growth with Equity-Published for the United Nations Development Programme.
- [13]. IDEA (2000). Democracy in Nigeria. Institute for Democracy and Electoral Assistance, Continuing Dialogue (s) for Nation Building, Stockholm, Sweden.
- [14]. K.O, P.R.O and Ogirigiri, M.A. (1990). "Controlling the Threat and Menace of Desertification and Erosion in Nigeria" in the Environment and Sustainable Development in Nigeria. Proceedings of a workshop held at the Nicon Noga Hilton Hotel, Abuja FCT. 25th-26th April, 1989. Federal Government Protection Agency (FEPA).
- [15]. Kolawole O.M, Olayemi, A.B and Ajayi, K.T. (2011). Managing flood in Nigerian Cities: Risk Analysis and Adaptation and Adaptation Options-Ilorin City as a Case Study. www.unilorin.edu.ng/publications/olayemi/4.pdf

- [16]. Maxwell Scientific Organization. www.maxwellsci.com/print/ijfas/v.1-35-46.pdf.
- [17]. Monkhouse, F.J. and Small, John (1978). *A Dictionary of the Natural Environment*. New Edition of Monkhouse. A Dictionary of Geography (Edward Arnold) Publishers.
- [18]. Obasanjo, O. (2005). 'Introduction' National Policy on Flood and Erosion Control.
- [19]. Oddih, M. (2007). "Electoral Fraud and the Democratic Press: Lessons from the 2003 elections" in *Elections and the Future of Democracy in Nigeria*.
- [20]. Okafor, F.C. (2011) "Environment and Natural Disaster in the Niger Delta Region of Nigeria: Causes, Prevention and Control.
- [21]. Santra, S.C. (2001). *Environmental Science*; London, New Central Book Agency (P) Ltd.
- [22]. *Strategy in Critical Issues on Nigeria's Development, Environment, economy and Social Justice-essays in Honour of Professor Ementus Andrew O. Onokerhoraye*. Francis C. Okafor (ed) Ibadan, Nigeria. Spectrum Books Ltd.
- [23]. Ujo, A.A. (2011). *Public Policy Analysis: a Nigerian Perspective*. Kaduna, Nigeria. Anyoatu Enterprises and Publishers Nigeria Ltd.
- [24]. Wonah, E.I. (2010). *Party Ideology, Campaign and Consolidation of Democracy in Nigeria*. In *Political Communication and Democracy in Nigerian Democracy. A Book of Reading*. Godwin B. Okon (Ph.D) and Aniefiok Udo Udo (Ph.D.) (eds). Amethyst and Colleagues Publishers, Port Harcourt, Rivers State, Nigeria.