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Hazard Reduction Strategies for Flood Vulnerable Communities of Anambra State, Nigeria: Towards Sustainability

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ABSTRACT

Anambra state was designated as the most acutely flood-affected state in Nigeria after the unprecedented flood hazards of year-2012 which was seen as a national disaster in the history of the country. 57 communities in 8 local government areas of the state were affected. Reports has it that 7 million people were affected, 363 people killed and 2.3 million fell victims of internal displacement and evacuated to the available 24Flood Refugee Camps provide by government for Internally Displaced People. Federal, State and Local Governments spent billions of naira on relief materials. International donor agencies like UNICEF, UN and EU as well as non governmental organizations and philanthropists also supported the flood victims with relief materials worth billions of naira. The flood has come and gone; leaving behind irreparable effects on the people and government. Uncertainty, untold hardship and severe living condition are some of the resultant impact on the residents of the affected areas who currently dwell in deplorable conditions. Major loses include human and animal lives; agricultural products; housing, educational, health, transportation, commercial and other infrastructural facilities. Family and social ties and activities were hampered while daily livelihood activities were disrupted, water sources were polluted and the environment degraded thereby resulting to hunger, high cost of living and high morbidity rate. This study seeks out sustainable strategies for enhancing the structure and mode of operations of flood management agencies in Nigeria as a whole, and in the flood vulnerable communities of Anambra state in particular. Secondary data from the records of national, state and local Emergency Management agency and primary data through structure interview of the staff of the agencies used as respondents; were utilized. Sustainably creating, reviewing and implementing, flood control and management policies while incorporating public participation among other mitigation measures were recommended, towards ensuring social, economic and environment empowerment of the people.

Key words: Hazard Reduction Strategies, Flood Vulnerable Communities in Anambra State and Sustainability

1.0 INTRODUCTION

Flooding displaces more people than any other disaster, because its frequency is higher. It is an annual occurrence in most places particularly in the riverine areas of Anambra state. Studies have shown that about 20% of the Nigerian population is at the risk of flooding (Etuonovbe, 2011). It causes death and displacement of communities among other hazards. The nation wide effect of the 2010 flood in Nigeria, had about 1,555 people killed; 258,000 people displaced and properties destroyed (Babatunde, 2011). In Nigeria, the 2012 flood reports had far higher casualties than any other in the history of the country, (NEMA, 2012).

Floods occur when water particularly from rainfalls accumulates across an impermeable surface and cannot rapidly dissipate or evaporate. Floods can also be caused by a series of storms moving over the same area. Even dams can flood low-lying areas, often causing significant damages.

Globally, riverine areas are naturally prone to flooding. The flood hazard of year 2012 was unprecedented in Nigeria and was seen as a national disaster. 94% of states of the Federation including Anambra state suffered great losses in the flood. 38% of Local government areas in Anambra state including the Omambala area were adversely affected. Houses and other public and private properties, infrastructure and facilities were submerged and destroyed while many residents were displaced (SEMA, 2012). The essence of this paper is to seek for ways of enhancing the structure and operations of the existing flood management in Nigeria as a whole and Anambra state in particular.

2.0 LITERATURE REVIEW

2.1 FLOOD VULNERABILITY AND HAZARDS REDUCTION STRATEGY

Flood vulnerability can be defined as the measure of exposure of an individual, households, groups, communities or an area to risk of falling victim to flooding. Flood vulnerability factor is seen as a function of geographical (topographical and hydrological) characteristics of spatial location of activities or settlements. Flood risk is expected to increase substantially in subsequent years as a result of both climate change and continued socio-economic development activities that are unfriendly to the environment (Ibim , 2011). Also in practical terms,

incidence of flooding can never be eliminated entirely, but the hazards or consequences of flooding can be properly mitigated by appropriate behaviors and actions. Successful flood risk management is dependent upon the active support of all the affected communities that receive direct flood impact and those directly at risk, coupled with the civil authorities and the wider community and its leaders, as well as governments of national and international communities. Recent studies have revealed that socially vulnerable or disadvantaged households have lower levels of disaster preparedness. Proper documentation of long-term flood impacts on communities is thus a necessity.

2.2 FLOOD RISK MANAGEMENT IN DEVELOPED COUNTRIES

Flood risk poses significant threat to many communities and nations, hence the need to reduce the hazards. Whereas measures can be taken to reduce the likely hazards and impacts of flooding, the risk can never be eliminated altogether. This was also the opinion of Crossman, et al. 2006:41who pointed out, that in the UK; flood risks represent a significant threat to many communities and that around 1.8 million households and 140,000 commercial properties in England and Wales are located in floodplain areas and that this affects at least 4-5 million people. They further pointed out that a range of flood risk management activities were undertaken by the authorities.

In England, the flood and water management Act of 2010 empowers the Environmental Agency to develop, maintain, apply and monitor a strategy for flood and coastal erosion risk management. The strategy was developed in line with government policy on National Flood and Coastal Erosion Risk Management strategy for England, 2010 (FCERM) and other related issues. It is heavily informed by stakeholder inputs and public consultation processes. The strategy describes what needs to be done by all organizations involved in flood and coastal erosion risk management which include local authorities, internal drainage board, water and sewerage companies, highway authorities, and the environmental agency. They all act to reduce the risk of flooding and coastal erosion, and manage its consequences. The strategy sets out a statutory framework which will help communities, the public sector and other organization to work together in the management flood and coastal erosion risks. It seeks to support local decision making and engagement in the National Flood and Coastal Erosion Risk Management strategy for England, 2010(FCERM), making sure that risks are managed in a coordinated way across catchment areas and along each stretch of coastland. This includes the development of local flood management strategies by lead flood authorities, as well as a strategic overview of all source of flooding and coastal erosion.

The national strategy further sets out what needs to be done to manage risks, by improving understanding of them, reducing the likelihood of incidents happening, as well as managing the potential consequences to people, business, infrastructure and services. Using the strategy, all the organizations listed above were to work together with communities to:

- Manage the risk of flooding and coastal erosion to people and their property while improving on the standards of protection according to trends over time.
- Help householders, business and communities better understand and manage the flood and coastal erosion risks which they face.
- Respond better to flood and coastal erosion incidents and during recovery.
- Move the focus from national government-funded activities towards a new approach that gives more power to local people, either at an individual community or local authority level. Local innovations and solutions were also to be encouraged too.
- Put sustainability at the heart of the actions taken, so as to work with nature and benefit the environment, people and the economy.

The overall aim of the strategy was to ensure that flooding and coastal erosion risks are well-managed and co-ordinate, so that the impact of floods are minimized.

3.0 FLOOD RISK MANAGEMENT IN NIGERIA

Nations with flood vulnerable communities strive to reduce the hazards by evolving policies and actions which are suitable to them. In the opinion of Ibem (2011); every tier of Government shall build the capacity of their emergency management institution to prepare for, prevent against, respond to and recover from disaster events. Here in Nigeria, the opinion is that the Federal, State, Local Government and relevant agencies, civil society organization among others should strive to develop their capacities in disaster management while community institutions shall acquire disaster management capabilities as first respondents while emergency management volunteers would complement the organized structures. Disaster response units have been established in different military formations across the country to provide assistance to civil authorities during emergencies. The Nigerian Government being the prime mover, has instituted a whole range of agencies, policies and activities to achieve

mechanisms which seek to prevent and prepare for natural and man-made disasters especially flooding and such agencies include:

- FEMA (2012) Federal Emergency Management Agency: the goal of FEMA is to reduce flood risks in exchange for federally funded insurance protection, which property owners could purchase.
- NIMET (2013) Nigerian Meteorological Agency: It is an agency that is responsible for issuing various warnings to all states about expected weather and rainfall patterns as well as imminent risks.
- NEMA (2012) - National Emergency Management Agency: NEMA is responsible for disaster risk management aimed at containing any disaster or emergency through proactive deployment of resources, personnel and development of early warning system and response mechanisms.
- SEMA- State Emergency Management Agencies: SEMA formulates policies on all activities relating to disaster management in the States and co-ordinate plans and programs for efficient and effective response to disasters in the States.
- LEMA- Local Emergency Management Agency: The local government arms of SEMA.

These statutory agencies who are now champions of all effort which are aimed at controlling flood hazards and flood reduction in Nigeria, were hitherto not in existence. However, recent incidences of hazards have ushered them to the scene, with enormous challenges which must be addressed in a holistic and sustainable manner, both in policy formulations and actions, as against the current haphazard and unsustainable approach which is ineffective and expensive.

4.0 Hazard Reduction Strategies for Flood Vulnerable Communities of Anambra State, Nigeria

This study utilized secondary and primary data sources. The structured interview of the hierarchy of NEMA, SEMA and LEMA staff gave insight into the flood risk management operations in the state. Respondents revealed that the 2012 flood had a terrible impact on the socio-economic, socio-cultural and religious lives of the people of Anambra state with women, children, the disabled and the aged recorded as the most vulnerable victims while the poor were the most hit. They were of the opinion that over 2.3 million people were victims of internal displacement while 363 people were reported killed. Victims in the state; they said cut across 57 communities in 8 local government areas, namely: Ayamelum, Anambra east, Anambra west, Ogbaru, Awka north, Ihiala, Ekwusigo and Idemili local government areas. Furthermore, the respondents revealed that the agencies listed above performed tremendously in the aspect of evacuation of displaced victims to refugee camps and also helped in the provision of relief materials which were identified as their major preoccupation in the state. In terms of organizational structure, it was found that NEMA a governing council and a Chairman, followed by a Director General, Departmental Directors and Zonal Directors. The agency is structured into six departments, namely: Planning, Research and Forecasting, Administration and Supplies, Relief and Rehabilitation, Search and Rescue, Training, Finance and Accounts. The observed structure revealed that no efforts were made to include public participation in flood hazard reduction. It was also observed that there was little or no coordination among the various levels of the flood risk management agencies right from the national (NEMA) to the states (SEMA) and down to the local governments (LEMA). This was attributed to poor staffing and training as Anambra state had only 20 staff. The study also revealed that inadequate equipment and over-concentration of authority, resources and logistics at the national level (NEMA) coupled with the awkward bureaucratic forces and administrative bottle necks which tend to hamper the effective response to emergency situations and public participation.

Warnings about expected weather and rainfall patterns as well as imminent risks are poorly utilized and grossly ignored due to poor level of public participation and awareness programs organized by the agency. Relief materials such as food stuffs, clothing, bed materials, drugs and Medicare worth billions of naira were provided. However, prompt and proper distribution of relief materials remains a major challenge to the agency. Their activities are hampered by delays and poor targeted operations, hence leading to anger, bickering and acrimony among victims in the flood affected areas. The random and indiscriminate estimation and distribution methods of relief materials to vulnerable communities is therefore inadequate, faulty and unsustainable, at cushioning the effects of flooding and for hazard reduction on the vulnerable people and communities in Anambra state. Sometimes, some unaffected people even took the advantage and collected relief material while some adversely affected people especially the poor, got little or no relief materials.

5.0 CONCLUSION AND RECOMMENDATIONS

The recent unprecedented devastating effects of flooding in Nigeria has made it urgent for us as a Nation and as people in the flood vulnerable communities of Anambra state to seek for proactive and sustainable measures which will help reduce the hazards of flooding in these communities. In the light of the impact of the 2012 flood in Anambra state, there is need for all the flood management agencies right from the National level; National Emergency Management Agency (NEMA) with its state (SEMA) and local government area (LEMA)

counterparts to rise to the challenge of ensuring sustainable hazard reduction of flooding in the vulnerable communities in the country as a whole and Anambra state in particular so as to ensure environmental, social, and economic development of citizens of the country. Such efforts must be crafted to enable the agencies rise decisively against the various challenges observed in the study in relation to their organizational structures and mode of operations. The following recommendations are therefore posited towards ensuring sustainability in the vulnerable communities which are mostly riverine and low-lying areas.

1. Since flood affects various sectors of national life, there is need to evolve multi-sectoral approach to flood mitigation, as opposed to single sector flood management procedures.
2. There is need to review the organizational structure and implementation approach to policies of agencies involved in flood management.
3. Flood management agencies must develop maps of flood zones well delineated while adopting effective public participation techniques.
4. The flood management agencies must learn to utilize local peculiarities and administrative structure in achieving effective flood management strategies such as early warnings, relocations, land use plans, creation and clearance of water ways and drainage channels among others.
5. Urban and Rural Planning and Flood management agencies must ensure that houses are constructed with durable building materials away from flood prone areas.
6. Anambra state and her flood management agencies should organize vulnerable people into groups of cooperative societies for mutual support and benefits, through capacity building, pulling resources together, education and information sharing and effective public participation in self-help programs. This will enhance proper identification and targeting of vulnerable people so as to better equip, empower and build resiliency into them, while curbing the tendency of rural-urban migration.
7. The state Ministry of Agriculture through the Cooperative societies should provide quick maturing crop and animal species, as well as finances and other inputs to farmers, while also providing Extension Services and quick harvest and storage mechanisms and facilities so as to encourage Communities to increase area cultivated and to enhance food security.
8. Infrastructure should be put in place for harvesting of excess flood water for power generation in form of dams, irrigation for agriculture, provision of water reservoir and water treatment plants for potable water supply, for sustainable development in the areas.
9. The state government should construct canals and drainage channels in the affected areas, for easy drains of water after heavy rainfalls.

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