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National Emergency Management Agency and Disaster Management: An Assessment of Flood Disaster Management in Anambra North Senatorial Zone of Anambra State, Nigeria

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ABSTRACT
The uncontrolled influx of flood disasters is a dangerous threat to not just human life but to infrastructure and economic stability as it can have dire consequences including loss of property, displacement of communities, long-term psychological trauma, disease outbreak, worsening the overall vulnerability of affected communities and capable of disrupting essential services. This paper is a critical study of the National Emergency Management Agency and Disaster Management: An assessment of Flood Disaster Management in Anambra North Senatorial Zone of Aanambra State, Nigeria. Despite efforts by the National Emergency Management Agency (NEMA), the recurring flood disaster in Anambra North Senatorial Zone of Aanambra State, Nigeria has posed serious problems detrimental to the affected communities and the outer extended society. The study therefore used a survey research design to assess the effectiveness of NEMA's adopted strategies in mitigation, level of preparedness, response and recovery; the overall impact of NEMA's effort in the affected communities as well as to identify challenges that militate against NEMA's effectiveness in the area. The findings of the study revealed gaps in the level of NEMA's disaster preparedness and response in terms of providing durable infrastructure, community engagement and post disaster rehabilitation (recovery). Issues such as inadequate relief materials, insufficient training for responders, and challenges in service accessibility, systemic issues like corruption, mismanagement of resources, inadequate funding, and limited technological capabilities present significant barriers to NEMA's efficient and effective disaster management. We recommend that NEMA should prioritize adequate provision of relief materials and invest in comprehensive training for emergency responders to bridge the gaps identified in the study, targeted strategies should be developed to ensure that NEMA's services are accessible to all flood-affected community members, particularly vulnerable groups, by improving logistical and infrastructural support and more importantly structural reforms - including enhanced funding, tackling corruption, and improving technological resources, should be implemented to overcome the challenges of resource mismanagement, political interference, and bureaucratic delays that hinder NEMA's disaster management efforts.

Key Words: NEMA, Disaster, Emergency, Disaster Management, Risk Reduction, Community Resilience

INTRODUCTION

According to the Journal of Home- land Security and Emergency Management, (2018), a national emergency is 'a situation beyond the normal capability of a state or local governments to respond, requiring federal intervention and support to preserve life, protect property and maintain national security"

A national emergency is a crises situation that necessitates exceptional measures to protect the nation, its citizens, or its interests from harm. It is characterized by urgency, severity and unpredictability (International journal of Emergency management, 2019). It is a situation that threatens the very survival, stability or well being of a nation and demands swift and extraordinary action to mitigate or resolve the crises

Being an extraordinary circumstance such crises situations is a threat to public health and economic stability and so demands the invocation of special powers, authorities or measure to safeguard national interests, maintain public order and ensure the stability and continuity of government (American journal of public administration, 2017). Owing to the nature of such situations, emphasis is placed on the need for swift action, release of special powers of the state and coordinated response to address the crises. Thus a national emergency or disaster situation is declared as a state of emergency by the legitimate powers of the state and by the declaration of a state of emergency; the president of the nation is clothed with extra powers to address the situation quickly and effectively.

Nigeria a popular state in West Africa faces various emergency situations which takes the form of natural disasters, health emergencies, security emergencies, security emergencies, environmental emergencies, social emergencies, infrastructural emergencies etc (NEMA, 2019; UNOCHA, 2020; IFRC, 2019).

Within the context of this study, emphasis is on natural disasters. A natural disaster is a sudden, catastrophic event caused by natural processes such as earthquakes, floods, hurricanes, landslides, volcanic eruptions and wildfires that can cause loss of life, injury, and damage to infrastructure and the environment"(IFRC, 2019). It is an event of nature, which overwhelms local resources and threatens the function and safety of the community. Natural disasters are latent danger constituted by the possible occurrence of a dangerous phenomenon (natural or man- made); capable of producing adverse effects on people goods, public services and the environment (UNICEF, 2020).

Of all forms of natural disaster, flooding is one of the most dangerous and destructive. It can cause wide-spread destruction to infrastructures, homes and businesses, while also posing significant health risks through water borne diseases, contamination and mental trauma. More so flooding can be deadly with rapid-rising waters sweeping away people, vehicles and structures; and disrupting essential services leading to long term displacement, economic loss and environmental degradation. Schramn and Dries (1986) assert that flooding is number one natural disaster hazard that is becoming a greater threat than a constant or declining one.

Adedeji et.al (2012) believes that flooding occur due to human influence on the urban modification, and alteration in the urban space or area; and maintain that the disastrous consequences are dependent on the degree of human activities and occupancy in vulnerable areas. These human influences in urban modification according to Ezeokoli et.al (2015) can lead to deltaic wetland losses either by direct destruction or rapid changes to the natural delta environment. This generally will reduce the adaptive capacity of the delta to cope with sea level rising and other climate change impact. Schramn and Dries (1986) posits that dams and levee failures, torrential rains of hurricane, snow thaws, i.e. floes blocking a river and burst water may trigger off flooding. To Nwilo (2013) flood occurs when the carrying capacity of the water courses is exceeded and when there is blockage of the water course and drainage channels. The incidence of flood disaster in Nigeria has become so pronounced thus causing a serious threat to sustainable development.

Anambra state is a state in south-east Nigeria and according to Ademola, Adebukola etal, (2016), Anambra state is one of the six states in Nigeria where floods were prevalent. Flooding in Anambra North senatorial zone is characterized by seasonal overflow of rivers, heavy rain falls and poor drainage

affecting all the areas in the zone. This negatively affects all facets of living- economic, social and educational; health etc., displacing thousands of residents and causing significant and severe damages; disrupting essential services, intensifying poverty and hardship in the affected communities.

The two worst flooding in Anambra north sensational zone occurred in 2012 and 2018 causing unprecedented devastation. In 2012, the flooding was triggered by the release of excess water from the Cameroonian Lagdo Dam, which combined with heavy rainfall, resulted in the overflow of River Niger and its tributaries (NEMA, 2012). The flood affected nine local government areas, displacing many people and destroying homes, farms and infrastructure in Anambra state. (Anambra state Government, 2012; NIMET; 2012; NEMA, 2012). In 2018 again, heavy rainfall and the overflow of the River Niger caused flooding in the same Anambra north senatorial zone of Anambra state, affecting seven local government areas.

At the frontline of all these` crises situations is the National Emergency Management Agency (NEMA) and the State Emergency Management Agency (SEMA). NEMA is charged with the function of coordinating disaster management efforts, taking measures to prevent or mitigate disasters, developing and implementing emergency preparedness plans, responding to disasters, providing reliefs and support, and facilitating recovery and rehabilitation after disasters. (NEMA, 1999; Disaster Management Act, 2010).

NEMA's role in flood management in Anambra North senatorial zone is a blend of successes and failure. On the one hand, the agency has taken proactive steps to mitigate the impact of flooding in the area but critics argue that NEMA's response has been inadequate as many communities remain vulnerable to flooding despite the agencies effort. Despite NEMA's interventions, flood disasters continue to ravage and wreck havoc in Anambra North senatorial zone thus; necessitating an assessment of the agencies' response effectiveness. Adequate and detailed exposition on this will highlight the strengths and weaknesses of NEMA in flood management as well as what needed to be done and put in place by NEMA to provide a lasting solution.

This study therefore assessed the effectiveness of the National Emergency Management Agency in disaster management in Anambra North senatorial zone with respect to the four phases of disaster management which forms the core theme of NEMA's mandate - Mitigation, Preparedness, Response and Recovery. Specifically the objectives of the study include;

- To ascertain the effectiveness of NEMA'S adopted strategies for flood disaster management in Anambra North Senatorial Zone of Anambra state.
- To determine the impact of NEMA's intervention on flood-affected communities.
- To identify the challenges militating against effective flood disaster management by NEMA.

The following hypotheses derived from the objectives were formulated as guide to the study

NEMA's adopted strategies for flood management in Anambra North senatorial zone of Anambra state are not effective

- NEMA's intervention in flood management has no impact on flood-affected communities in Anambra North senatorial zone of Anambra state.
- Insufficient fund, insufficient personnel and limited technological resources are not challenges to NEMA's effectiveness in flood disaster management in Anambra North senatorial zone of Anambra state.

2. Conceptual Explanations

National Emergency Management Agency

The National Emergency Management Agency (NEMA) was established via Act 12 as amended by Act 50 of 1999 to manage disasters in Nigeria. To manage emergencies disasters in the nation, NEMA has worked through the establishment of concrete structures and measures such as awareness creation on what disasters are and citizens initial response to emergency situations.

The Act stated above vested the authority to manage disasters in Nigeria on NEMA and according to the Act the agency shall among other things:

- Formulate policy on all activities relating to disaster management in Nigeria and co-ordinate the plans and programmes for efficient and effective response to disasters at national level;
- Monitor the state of preparedness of all.

To deliver on this mandate, NEMA adopted facilities and infrastructures for effective disaster management. These according to Agetue (2019) include:

Mission Control Centre

This is located at the headquarters of NEMA and it is a computer based satellite technology that uses the **COSPAS-SARSAT** high tech system facility designed to pick distress alerts and location data to assist in the search and rescue operation, using spacecraft and ground facilities to detect and locate the signals of distress.

The Geographic Information System

This is a functional lab for early warning and precision in response to the management. The lab collects spatial data, analyses and prepares useful information that helps to aid responses to disaster. This is a veritable instrument of the agency for its disaster risk reduction programme.

Mobile Clinics

The agency has the approval to procure facilities for mobile clinics strategically positioned in major cities and to be deployed in the event of major disaster.

Helicopter for Search and Rescue

There is a provision for a helicopter for search and rescue operations in Abuja alone for now. Plans are underway for the provision of such at the six geopolitical zone offices of NEMA.

Apart from these, NEMA has well formulated policies, programmes and strategies, the essence of which is to provide a framework for disaster risk management and environmental conservation in Nigeria. These policies and strategies are designed to mitigate the impact of disasters (disaster risk reduction), protect the environment and promote sustainable development

NEMA has a central office (Headquarters) in Abuja, zonal offices, and collaborates with state emergency management agency in all states of the federation. (State Emergency Management Agencies are established and funded by the state governments). Key stakeholders include the federal government, state government, local government, international organizations, non-governmental organizations and the public sector.

It has an operational framework as earlier pointed out made up of programmes and initiatives such as the national disaster risk reduction policy, emergency response plan, and disaster management framework and flood disaster management plan.

Drawing from the mission and vision statement of NEMA which is to coordinate resources towards efficient and effective disaster prevention, mitigation preparedness, response and community resilience to disaster in Nigeria (NEMA Bulletin).NEMA performs the following specific functions:

i. Collate data from relevant agencies so as to enhance forecasting, planning and field operation of disaster management;

ii. Educate and inform the public on disaster prevention and control measures;

iii. Co-ordinates and facilitates the provision of necessary resources for search and rescue and other types of disaster curtailment activities in response to distress call;

iv. Co-ordinate the activities of all voluntary organizations engaged in emergency relief operations in any part of the federation;

v Receive financial and technical aid from international organizations and non-governmental agencies for the purpose of disaster management in Nigeria;

vi. Collect emergency relief supply from local, foreign sources, including international and non-governmental agencies.
vii. Distribute emergency relief materials to victims of natural or other disasters and to assist in the rehabilitation of the victims were necessary;
viii. Liaise with State Emergency Management Committees established under section 8 of the Act to assess and monitor where necessary, the distribution of relief material to disaster victims;
ix. Process relief assistance to such countries as may be determined from time to time;
x. Liaise with the United Nations Disaster Reduction Organization or such other international bodies for the reduction of natural and other disasters;
xi. Prepare the annual budget for disaster management in Nigeria and
xii. Perform such other functions which in the opinion of the Agency are required for the purpose of delivering its objectives under this Act (NEMA Bulletin,2018; Gambo 2006, Agetua et.al; 2019)

The National Disaster management framework (NDMF) which serves as a regulatory guideline for effective and efficient disaster management defines measurable, flexible and adaptable coordinating structures and aligns key roles and responsibilities of disaster management stake holders across the nation.

Although there are agencies and institutions that could respond in cases of emergencies, NEMA is at the centre point of coordinating emergencies response to disaster management in Nigeria.

Six zonal offices were created by NEMA in each geo-political zones of the country as a strategy to decentralize disaster management and ensure efficient and effective utilization of resources for speedy response to disasters across the country. Thus, the zonal offices are the extensions. NEMA also collaborates with state-level emergency agencies known as State Emergency Management Agencies (SEMAs) to ensure a coordinated response to disasters across the country.

Disaster

The National Emergency Management Act of 1999 defines natural or man-made disasters as including any condition arising from crises, epidemic, drought, flood, earthquake, storm, train, aircraft, oil spillage or other accidents and mass deportation or repatriation of Nigerians from other countries. Disaster is a sudden catastrophic situation that causes loss of life and properties and damage to the environment.

Ayoade and Akintola (2009) define a disaster as "a rapid disruption of natural situation and normal human activities causing damage to property and/or injury to people" Disasters are serious disruptions to the functioning of a community that exceeds its capacity to cope using its own resources. It can be natural, man-made and technological hazards as well as various factors that influence the exposure and vulnerability exposure of a community (Maigari; 2009). In line with this view, Hanga (2004) posits that disasters can be natural, or human induced. Those caused by nature are called natural disasters; examples are: extreme weather conditions windstorm, flood, rainstorm, drought, desertification, epidemics, volcanic eruptions, earthquakes etc. Human induced disasters whether intended or in error are called man-made. Examples are collapsed building structures, road, train or boat mishaps, bomb explosion, cult disturbances etc.

A disaster occurs when, in the face of a natural threat, the following conditions are met at the same time

- People live in risky places such as near an active volcano, on slopes with landslide hazards, or near rushing waters that can be overflowed.
- An extreme phenomenon occurs, either natural or man-made (as in the case of fires etc).
- The phenomenon causes a lot of damage.

Adedeji, Odufuwa and Adebayo (2012) see disaster as a serious threat to sustainable development. Haigh (2010) asserts that disaster has the ability to severely disrupt economic growth and hinders a person or state's ability to come out from poverty.

UNDRR(2017)defines disaster as "a serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity,

leading to one or more of the following: human, material, economic and environmental losses and impacts".

Keeps (1998) sees disaster as a sudden, calamitous event that seriously disrupts the functioning of a community or society and produces human, material and economic losses that are beyond the communities' ability to cope.

According to Carr (1932 cited in Dombrousky 1998) not every windstorm, earth tremor, or rush of water is a catastrophe. A catastrophe is known by its works; that is to say, by the occurrence of a disaster. So long as the ship rides out of the storm, so long as the city resists the earth shocks, so long as the levees hold, there is no disaster. It is the collapse of the cultural protections that constitutes the disaster proper. While hazards are threats, disasters are the actual events that cause harm to the society and human welfare. Hence disasters are a complex combination of natural hazards and human action (Blaike et al, 2003). Several human actions can increase vulnerability to disasters, for instance deforestation, living in risky places and fires.

A disaster emergency is therefore the state of crises resulting from a disaster associated with a natural threat. It is a state of crises and urgency that requires immediate action to save lives and property, prevent human suffering and meet the needs of those affected. Disasters are sometimes considered hyper complex emergencies or major emergencies involving multiple people at risk of harm, multiple jurisdictions responding, and resources that are not immediately available locally (Oliver, 2010). According to Usman and Ushama (2019) disaster can be classed into three levels: level 1 (minor), level 2 (major) and level 3 (catastrophic). Minor disaster is disasters that could be handled within the available resources of the immediate community (Bekwe, 2009). In this case, the local community is usually responsible for decision making process to resolve the incidence (Ayode &Akintola; 2009) Examples include: road accidents collapsed building, market fire etc. Major disasters are disasters whose impact overwhelms the capacity of the local community and requires response or assistance from the state or external agencies (NEST, 2009). They include: windstorm, air or rail crashes, disease epidemic etc. Such situations require coordinated efforts and commitment of personnel, equipment and resources from the assisting agency (Adeoye; et.al 2009). Catastrophic disasters are disasters that occur without warning and whose magnitude is so large to be declared by the president of the state as a national disaster. Catastrophic disasters include: earthquake, terrorist attack, civil disturbance, bomb explosion, toxic gas emissions etc. Catastrophic disasters demand that the government of the state and in most cases the international community are involved in the mitigation activities (Hanga 2004)

Nigeria, just like other states of the world has encountered several forms of disaster which range from flooding, soil and coastal erosion, landsides, tidal waves, sandstorm, oil spillage, bomb explosions, air crashes, traffic crashes, epidemics, numerous ethno political and religious violent clashes etc.

Disaster Management

Disaster management is a systematic process of using the body of policy, administrative decisions, organization and operational skills, and capacities to reduce the risk of natural or man-made disasters and their adverse effect (Encyclopedia of public health; 2008)

It is the organization, planning and application of measures preparing for, responding to and recovering from disasters (UNDRR; 2017)

According to the International Water Association (IWA), disaster management is a strategic planning and procedure that is administered and employed to protect critical infrastructures (also known as critical assets) from, severe damages when natural or human made calamities and catastrophic event occur.

Disaster management plans are multi layered and are aimed to address such issues as floods, fires, bombing, spread of diseases etc (John, 2004). The Disaster plan addresses issues as relinquishing people from an impacted region, arranging temporary housing, food and medical care.

Disaster management aims to reduce, or avoid the potential losses from hazards, assure prompt and appropriate assistance to victims of disaster and achieve rapid and effective recovery.

There are three key stages of activities in disaster management. These are:

- Before a disaster: to reduce the potential for human, material or environmental losses caused by hazards and to ensure that these losses are minimized when disaster strikes.
- During a disaster: to ensure that the needs and provisions of victims are met to alleviate and minimize suffering.
- After a disaster: to achieve rapid and durable recovery.

Prevention, mitigation and preparedness form pre-disaster activities in the disaster management cycle, and response, (comprising relief, recovery, rehabilitation and in some cases mitigation are post-disaster activities). Whilst emergency relief and rehabilitation are vital activities, successful disaster management planning must encompass the complete realm of activities and situations that occur before, during and after disasters.

Disaster management is a comprehensive approach to preventing, preparing for, responding to, and aiding in emergency recovery efforts. (Tulare University, 2021)**.**

According to Agetue (2019) the four phases of disaster management are: Mitigation, Preparedness, Response and Recovery.

Mitigation (Prevention)

Reduce risks through proactive measures. Mitigation activities involve identifying risks and hazards to either reduce or eliminate the impact of an accident through structural measures. It often has a long term or sustained effect and direct impact.

According to Lindsay (2012) mitigation activities may be at the recovery stage of a major disaster. It may take the form of rules that restrict construction in flood plains, rebuilding damaged structures with quality materials, relocating home and structures located in flood plains, dam or levees that help prevent flooding.

Preparedness

Plan and prepare for potential disasters. This involves focusing on elimination or reducing risks with the aim of enhancing the capacity to respond to an accident through steps that will guarantee the capacity of institutions, disaster units and human resources to respond to disaster situation promptly and effectively.

Training, planning, availability of resources needed for such situations, information network and other activities that will help identify potential threats and the use of feedback to improve plans are all part of preparedness.

Response

These are activities and actions required to save lives, protect property, and the environment; and meet basic human needs. It simply means the actual implementation of plans in a disaster or emergency situation. Some examples of response activities include: evacuating victims, deployment of response teams, medical stockpiles and the establishment of command operations (Lindsay 2012).

Recovery

Recovery activities are geared towards restoring essential services and repair damages caused by the disaster. Some recovery activities are: provision of houses for displaced families, restore and rebuild affected communities.

Theoretical Framework

The study is anchored on Risk Management Theory. Risk management theory evolved through contributions from various scholars across different fields. Key proponents are Bernoulli (1738); Smith (1776); Kahneman (1979); Drucker (1955) etc.

Risk management theory focuses on understanding and addressing potential risks that could impact individuals, organizations or societies. The basic principles of risk management include:

- Risk identification - identify potential hazards and threat
- Risk assessment - evaluate likelihood, impact and vulnerability
- Risk prioritization - prioritize risks based on severity and likelihood

- Risk mitigation - implement measures to reduce risks
- Risk monitoring – continuously monitor and review risks

Risk management theory is crucial in disaster management as it enables proactive measures to mitigate, prepare for, respond to and recover from disasters.

3. **METHODOLOGY**

The study area is Anambra North Senatorial Zone of Anambra State of Nigeria, made up of seven local government areas, namely; Anambra East, Anambra West, Ayamelum, Oyi, Ogbaru, Onitsha North and Onitsha South.

The research adopted the survey research design (quantitative and qualitative). Data collected were from primary and secondary sources. Primary data were generated through the use of questionnaires administered to the respondents selected for the study, in-depth interviews with National Emergency Management Agency officials, State Emergency Management Agency officials, Local Emergency Management Agency officials and community stakeholders; focus groups discussion with community members and direct observation of the flood areas and facilities mounted by NEMA.

The qualitative data were generated from a review of existing literature, NEMA's reports and other government documents. The population of the study is N1,098,900(one million ninety-eight thousand, nine hundred people of the four local government areas in Anambra North Senatorial Zone of Anambra state known for the prevalence of flooding and 100 stakeholders in flood\disaster management. These are: Anambra East (216,800); Anambra West(238,400); Ayamelum (225, 500); Ogbaru(318, 200). (Anambra State Population Statistics; population projection; 2022); and 100 stakeholders (drawn from state officials and emergency responders) - a total of one million ninety-eight thousand, nine hundred people. Krejecie and Morgan table (1970) was used to determine the population size. Following Krejecie and Morgan's recommendation, that for a population which is greater than or equal to 1,000,000, the required sample size is 384, the sample size for this study is therefore 384 since the population exceeded 1,000,000. The sample size was shared among the four local government areas using Bowley's (1926) proportional allocation technique. This ensured that none of the participating local government was cheated. Drawing the respondent's from each Local Government the research used purposive sampling technique. Key officers of NEMA and other stakeholders were also selected for the study(those who were considered to possess the requisite knowledge on the subject of study were purposively selected). These include flood affected community members who were reached through focus group discussion, SEMA officials, Local Government officials, emergency responders, community leaders, government agencies that service NEMA and private sector organizations.

DATA PRESENTATION AND ANALYSIS

The data are presented in tables and charts and analyzed below:

Table 1: Measure of the Effectiveness of NEMA's Adopted Strategies

S/N	Items	Mean Response	Decision
1	NEMA's early warning systems effectively notify communities of impending floods.	3.4	Agree
2	NEMA's evacuation plans are well organized and efficiently implemented.	3.2	Agree
3	NEMA provides adequate relief materials to flood-affected communities.	2.3	Disagree
4	NEMA's collaboration with local authorities enhances disaster response.	3.5	Agree
5	NEMA's flood mitigation measures (e.g., dredging, levees) are effective.	3.0	Agree
6	NEMA's post-disaster rehabilitation programs support community recovery.	3.3	Agree
7	NEMA provides adequate training for emergency responders.	2.1	Disagree
8	NEMA's disaster risk reduction programs are effective in reducing flood impacts.	3.2	Agree
9	NEMA's emergency response plan is well-coordinated with other agencies.	3.1	Agree
10	NEMA's communication strategies effectively inform the public about flood risks.	3.3	Agree
Grand Mean		**3.04**	Agree

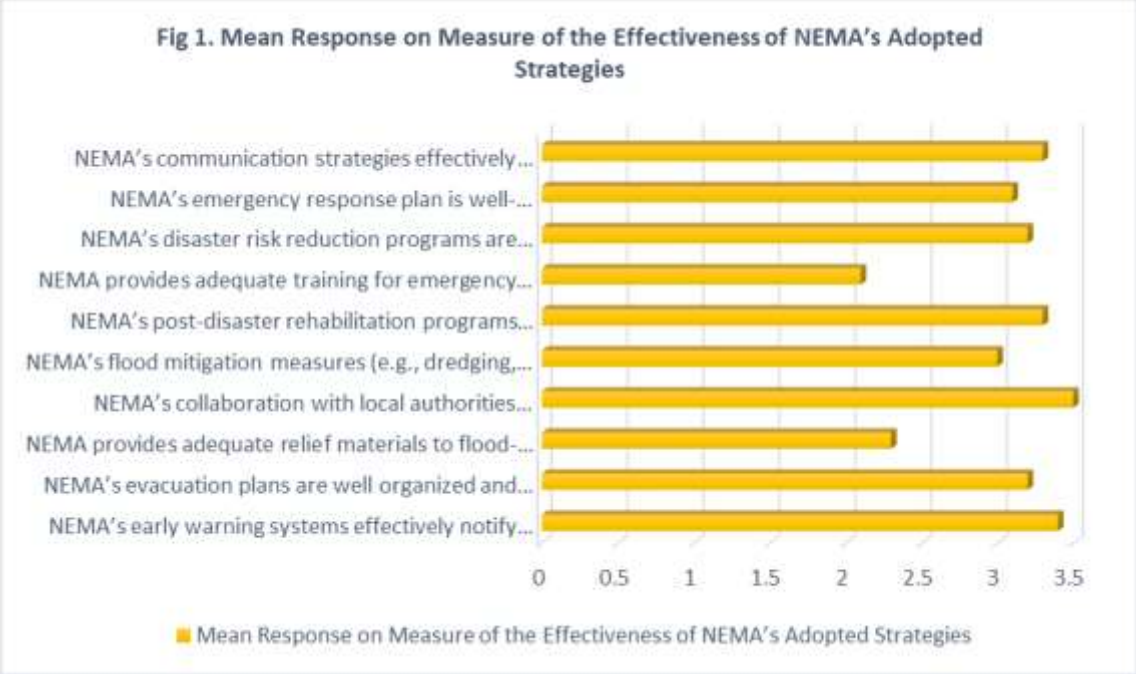


Table 2: Measure of the Impact of NEMA's Intervention on Flood-Affected Communities

S/N	Items	Mean Response	Decision
1	NEMA's interventions significantly reduce flood-related casualties.	3.7	Agree
2	NEMA's relief efforts alleviate economic hardship for flood victims.	3.5	Agree
3	NEMA's interventions improve living conditions for displaced persons.	3.3	Agree
4	NEMA's support enhances community resilience to future floods.	3.4	Agree
5	NEMA's services are accessible to all flood-affected community members.	2.1	Disagree
6	NEMA's interventions promote long-term community development.	3.2	Agree
7	NEMA's services reduce psychological trauma among flood victims.	3.3	Agree
8	NEMA's interventions promote environmental sustainability in affected areas.	2.9	Agree
9	The timing of NEMA's intervention was appropriate and effective.	3.4	Agree
10	Residents in the flood-affected areas are satisfied with NEMA's management of the flood.	3.2	Agree
Grand Mean		**3.2**	**Agree**

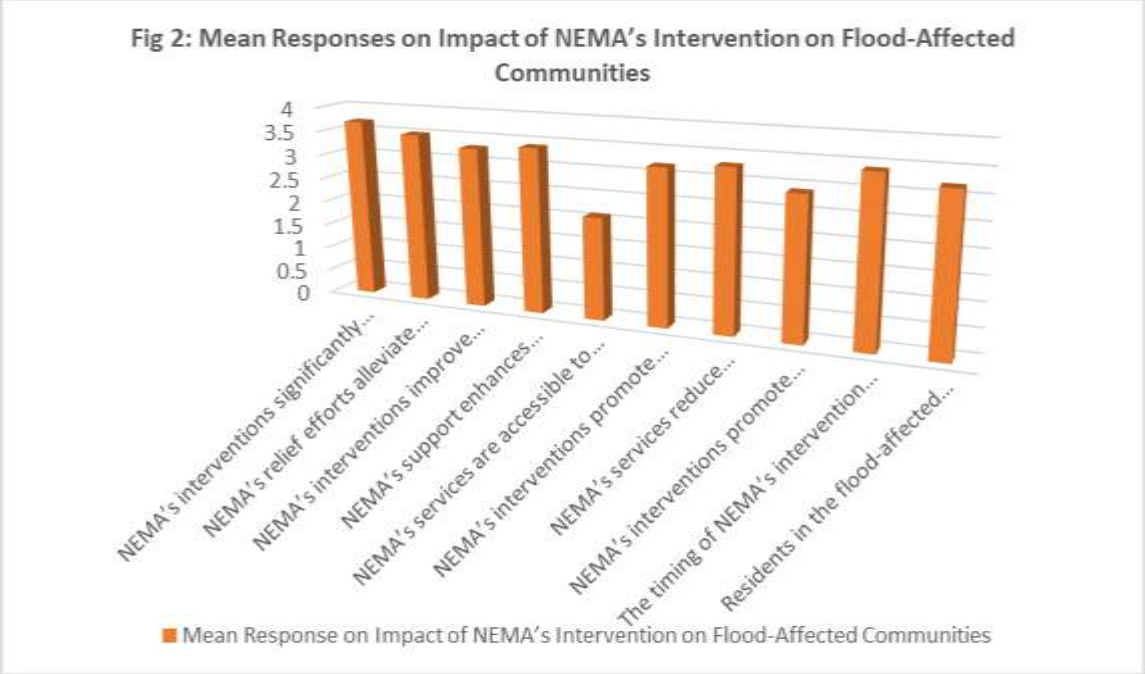
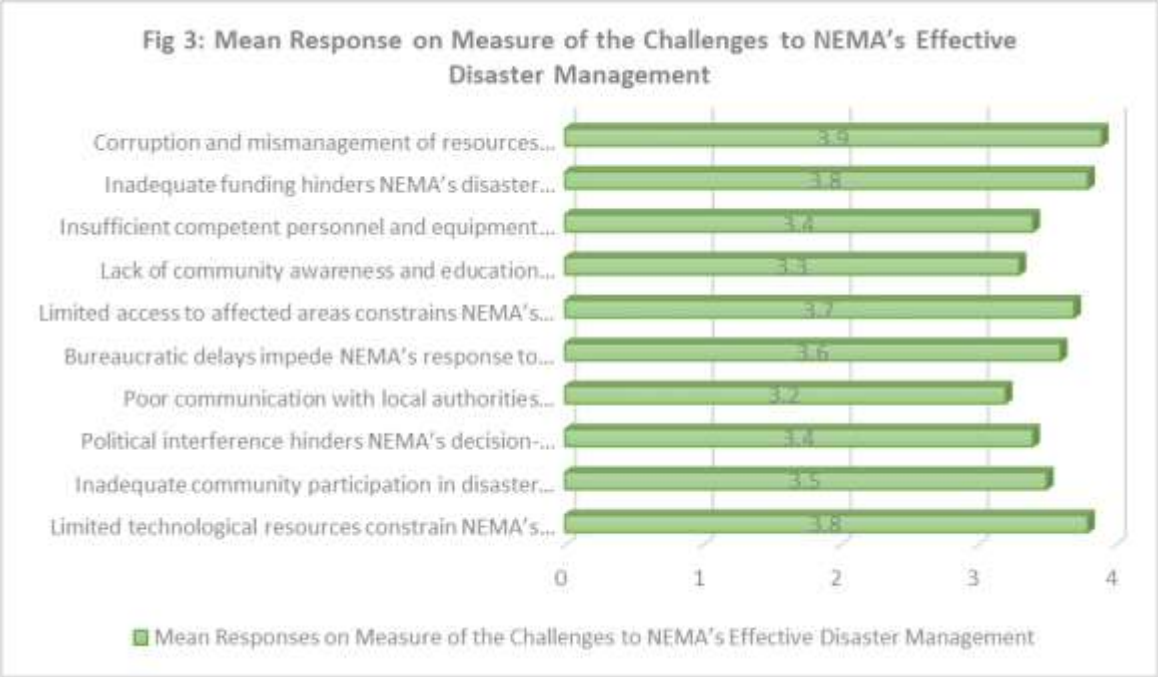


Table 3: Measure of the Challenges to NEMA's Effective Disaster Management

S/N	Items	Mean Response	
1	Limited technological resources constrain NEMA's effectiveness.	3.8	Agree
2	Inadequate community participation in disaster management planning limits NEMA's success.	3.5	Agree
3	Political interference hinders NEMA's decision-making process.	3.4	Agree
4	Poor communication with local authorities obstructs disaster response.	3.2	Agree
5	Bureaucratic delays impede NEMA's response to emergencies.	3.6	Agree
6	Limited access to affected areas constrains NEMA's relief efforts.	3.7	Agree
7	Lack of community awareness and education hampers disaster preparedness.	3.3	Agree
8	Insufficient competent personnel and equipment limit NEMA's effectiveness.	3.4	Agree
9	Inadequate funding hinders NEMA's disaster response efforts.	3.8	Agree
10	Corruption and mismanagement of resources undermine NEMA's efforts.	3.9	Agree
Grand Mean		**3.56**	**Agree**



DISCUSSION ON FINDINGS

From table 1, results indicate that NEMA's adopted strategies for disaster management are generally perceived as effective, with a grand mean response of 3.04, falling within the "Agree" category. Specifically, NEMA's collaboration with local authorities (mean = 3.5) and early warning systems (mean = 3.4) are viewed as particularly effective in enhancing disaster response and notifying communities of impending floods. However, areas such as the provision of adequate relief materials (mean = 2.3) and training for emergency responders (mean = 2.1) were rated poorly, indicating significant gaps in these critical aspects of disaster management. This also formed the view of other stakeholders who were interviewed. Majority believed that NEMA should review their strategy to incorporate and utilize local participation and ideas especially at the recovery stage. Some emergency responders interviewed highlighted the need for training and retraining of officials to enhance operational efficiency. Residents in the area affirmed that relief materials were grossly inadequate especially on issues relating to health and shelter. Studies by Adedeji et al. (2018) and Egbinola et al. (2020) corroborate these findings, emphasizing the importance of local collaboration and early warning systems in effective disaster management, while highlighting challenges like inadequate resources and training that hinder the operational efficiency of agencies like NEMA. These results underscore the need for targeted improvements in resource allocation and capacity building to address existing deficiencies.

Findings from table 2 indicates that NEMA's interventions have a positive impact on flood-affected communities, as reflected in the grand mean of 3.2, signifying agreement on most items. Key strengths include the significant reduction in flood-related casualties (mean = 3.7), alleviation of economic hardship (mean = 3.5), and improvement of living conditions for displaced persons (mean = 3.3). Additionally, NEMA's support is acknowledged for enhancing community resilience (mean = 3.4) and promoting long-term development (mean = 3.2). However, there is a notable concern regarding the accessibility of NEMA's services, with a mean response of 2.1 indicating disagreement. This suggests gaps in inclusivity and equitable service delivery. Data generated from the focus group discussion and interview with other stakeholders revealed that most of the critical areas were not reached during the incidents as NEMA was far too distant to the disaster areas. Some believed that some of the programmes mapped out to help them were either not implemented or diverted to wherever due to corrupt practices. According to the respondents, the impact of NEMA's intervention though significant, was not deeply felt. There were twenty seven holden centres in Anambra state, accommodation both residential and for school were inadequate and the few lacked basic facilities and thus posed a challenge to good health. Studies such as Oloruntoba et al. (2018) and Adekola et al. (2020) align with these findings, highlighting NEMA's effectiveness in immediate disaster response but also identifying challenges in resource allocation and equitable access. These results emphasize the need for targeted strategies to address gaps in service delivery while building on existing successes in disaster management.

The results from table 3 revealed significant challenges to NEMA's effectiveness in disaster management, with a grand mean of 3.56, indicating a strong consensus on the constraints faced. The highest-rated challenges are corruption and mismanagement of resources (mean = 3.9) and inadequate funding (mean = 3.8), emphasizing systemic issues that undermine NEMA's capacity to respond efficiently. Similarly, limited technological resources (mean = 3.8) and restricted access to affected areas (mean = 3.7) highlight operational limitations. Bureaucratic delays (mean = 3.6) and inadequate community participation (mean = 3.5) further hinder disaster preparedness and response. Data generated from the interview with SEMA officials show that there are structural impediments to effective flood disaster management by NEMA. For instance, SEMA dominates at the state level not NEMA officials and SEMA are employees of the state with distinct operational mechanisms. The zonal offices seem too far from the affected areas. These findings align with studies such as Ugochukwu and Ezenekwe (2020), which identified insufficient funding and resource mismanagement as critical barriers to disaster management in Nigeria. Furthermore, Adefisoye and Eniola (2019) noted the adverse impact of poor inter-agency coordination and political

interference on disaster response effectiveness. This underscores the need for structural reforms, enhanced funding, and community engagement to address these pervasive challenges.

5. CONCLUSION AND RECOMMENDATIONS

In conclusion, while NEMA's adopted strategies and interventions in disaster management are generally viewed positively, there are significant gaps that need to be addressed. The findings suggest that while NEMA's collaboration with local authorities and early warning systems have contributed to effective flood responses, issues such as inadequate relief materials, insufficient training for responders, and challenges in service accessibility hinder the agency's full potential. Additionally, systemic issues like corruption, mismanagement of resources, inadequate funding, and limited technological capabilities present significant barriers to efficient disaster management. Addressing these deficiencies is crucial for enhancing NEMA's effectiveness in disaster response and recovery.

Based on the findings, the following recommendations are made:

1. NEMA should prioritize adequate provision of relief materials and invest in comprehensive training for emergency responders to bridge the gaps identified in the study.
2. Targeted strategies should be developed to ensure that NEMA's services are accessible to all flood-affected community members, particularly vulnerable groups, by improving logistical and infrastructural support.
3. Structural reforms, including enhanced funding, tackling corruption, and improving technological resources, should be implemented to overcome the challenges of resource mismanagement, political interference, and bureaucratic delays that hinder NEMA's disaster management efforts.

REFERENCES

Adam, S. (1776). The wealth of nations (risk and uncertainty in economic decision making)

Adedeji, A. J., Akanbi, O.B., Adole· J.A Chima· N.C & Baje, M (2018). Outbreak of lumpy skin disease in a dairy farm in Keffi, Nasarawa State, Nigeria: *Sokoto Journal of Veterinary Sciences, 16 (3). 2-23*

Adedeji, O. Odufuwa, B. & Adebayo. O. (2012). Building capabilities for flood and hazard preparedness and risk reductions in Nigeria. Need for spatial planning and land management, Journal of sustainable development in Africa. 14(1), 45-58

Adeoye,N., Ayankade, A. & Babtimelin, O. (2009) Disaster in Nigeria; socio economic implications. Advances in natural and applied sciences.

Amos, T and Kahneman (1979) Prospect theory: an analysis of decision under risk. Econometrica 47 (2) 263-292.

Anambra State Emergency Management Agency (ANSEMA) (2012) Report on flood in Anambra State. Official report

Anambra State Government (2012) Anambra state flood disaster relief. coordinating committee interim report 1, Anambra forum report I.

Anthony, N, Agetue, F & Obuseh R (2019). An overview of emergency preparedness, response and Disaster Management in Nigeria: A study of National Emergency Management Agency World Educators forum. International Journal vol. II No 1 ISSN: 2350-2401.

Ayoade, J. and Akintola, F. (2009). Disaster perception in two Nigerian cities environment international.

Bekwe, W.F (2009). Attitudes and adjustments to disaster and disaster management in Nigeria. Unpublished B.Sc research Rivers state college of Education PH.

Bernoulli, D. (1738) Specimen theories Novae de Mensura sortis. St. Petersburg paradox.

Bowley A.L (1926). measurement of precision attained in sampling. bulletin de i'international de statisque 22 (3) 1-62

Dombtrosky W.R (1988). The sociology of disasters. Disaster research centre, University of Delware.

Drucker, P (1995). The practice of management (risk management in business) New Encyclopedia of Public Health (2008) Zbigniew Wkundzewick researc centre for agricultural and forest environment, polish academy of sciences, Poland books.

Ezeokoli, F., Okoye, P. & Ugochukwu S. (2015). The upshot of the 2012 flooding on

Gambo, D.B (2006) Nigeria disaster management preparedness strategy: an overview of disaster response plans, Abuja.

Haigh R (2010) "Developing a resilience built environment: post-disaster reconstruction as a window of opportunity" International conference on sustainable environment (ICSBE).

Hanga, I.G (2004) National Emergency Management Agency's Act no 12 of 1999 as amended: a review In Ayeni Bola and Ojo (2004)eds proceedings of the national conference of directors and heads of disaster management organizations in Nigeria, National Emergency Management Agency, Abuja.

IFRC (2002) Disaster Management Framework.

Keeps, P (1988) Disaster: a guide to family and community preparation. San Francisco club

Krejcie, R.V and Morgan D.W (1970). Determining sample size for research activities. Educational and psychological measurement, vol 30, No 3 PP 607-610.

Lindsey, B.R (2012). Federal emergency management: a brief introduction. Analyst in American national government.

Linham, M. & Nicholas R. (2010), "Technologies for climate change adaptation - coastal erosion and flooding" UNEP RISO centre on Energy climate and sustainable development RISO DTU national laboratory for sustainable energy, Denmark.

Maigari A.I (2009). Introduction to environmental problems and management wa'adallah environment consults (WADEC) Kano, Nigeria.

Margot. H.; Jackson, S.; Baker, S.; qian, H. ;Blackwood, L.; Kemp, E. &Cutter, S.(2024) "Evaluating the Quality of state hazard mitigation plans based on hazard identification, risk, and vulnerability assessments" Journal of home land security and emergency management, De Gruyter, vol.21(3)pp331-358

National Emergency Management Agency (2012), "Annual report on flood" official gazette, Abuja.

National Emergency Management Agency (2007) Mainstreaming disaster risk reduction into sustainable development in Nigeria. Vol 1.

National Emergency Management Agency (2018) National disaster risk management policy. Abuja, Nigeria

NEMA ACT of 1999

NEST (2009) Nigeria's threatened environment. Ibadan: Nigeria. The environmentalist 25(10) 39-45.

Nigerian Meteorological Agency (NIMET) (2012), Seasonal rainfall prediction and socio-economic implications for Nigeria.

Nwilo, P.C. (2013), Geospatial information in flooding and disaster management in Nigeria. 7th Annual lecture of the faculty of environmental sciences, Awka.

Oliver, C. (2010) Catastophic disaster planning and response. CRC press.

Schranin, D. and Dries, R. (1986), Natural Hazard, causes and effects. Univerisity of Wisconson, USA

Structural components and fabrics of buildings at ogbaru Anambara State, Nigeria American Journal of Civil Engineering & Architecture vol 3.N.4, pp129-136

UNISDR (2004) Disaster risk reduction, governance and development. International strategy for disaster reduction (ISDR) an educational series vol 2, issue 4.

UNISDR (2004) International strategy for disaster reduction framework for action 2005- 2015: building the resilience (A/CONF 206/6) (web.unisder.org/wedr).

United Nations office for Disaster Risk Reduction (UNDRR) (2017) www.unrr.org York, Happer Business.

INTERVIEW SCHEDULE
(for key stakeholders/ focus group discussion).

- What specific strategies has NEMA implemented to mitigate the impact of floods in Anambra North Senatorial Zone and how effective have they been in your experience?
- How do you think NEMA'S early warning systems and emergency preparedness measures have influenced the response to flood disasters in Anambra North Senatorial Zone?
- In your opinion, what are the strengths and weakness of NEMA's collaboration with local authorities and state holders in flood disaster management?
- What are the major challenges your face in implementing NEMA's disaster management plans?
- How do you think NEMA can improve its disaster response efforts?
- What resources or support does NEMA need to enhance its disaster management capacity?
- How often do you encounter challenges in accessing affected areas during disaster?
- How would you rate the overall effectiveness of NEMA's interventions?
- How would you rate the quality of relief materials provided by NEMA?
- How would you rate NEMA's response time to flood emergencies?
- What specific benefits have your derived from NEMA's interventions?
- How has NEMA'S support impacted your livelihood and well being?
- What suggestions do you have for improving NEMA's intervention in flood affected communities?
- Compared to before NEMA's intervention, how would you describe your current living situation?
- How often do your receive updates on NEMA's activities and interventions?
- Can you describe a recent instance where NEMA'S flood disaster management efforts were successful?
- What factors contributed to this success?
- What recommendations would you make to improve NEMA's flood disaster management strategies, considering the unique challenges and context of Anambra North Senatorial Zone?