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Achieving Sustainable Development Goals through Effective Flood Management in Nigeria: Lessons from the Netherlands

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Abstract
It is a known fact that, from time immemorial, flood has been ravaging many communities across the globe, and Nigeria is no exception. Flooding comes with many devastating effects and could negatively affect the laudable sustainable development goals (SDGs). The paper was an attempt to find lasting solution to the challenge of perennial flooding in Nigeria. The paper examined some of the causes, the consequences and reviewed some of the government interventions on flooding in Nigeria. There was a comparative review of several articles on flood management in Nigeria and the Netherlands. Three findings were deduced from the materials reviewed on flood management in Netherlands Spatial Planning; Flood Defenses Mechanism; and Flood Forecasts, Alerts and Evacuation. These findings and implications were discussed within the purview of general systems theory (GST) towards effective flood management in Nigeria. And the following were recommended: government agencies should carry out the sensitisation and enforcement of policies for people to desist from blocking waterways and buildings on flood plains; proactivity and investment in flood mitigation methods such as dam building, dredging rivers, clearing of drainages and natural canals; and finally, relevant flood prevention agencies should be well funded and monitored to avoid mismanagement.

Keywords: **Flooding; Sustainable Development Goals (SDGs); Flood Management; Government Agencies; General Systems Theory**

Introduction

The continuous and fairly efficient discharge of certain functions by government, central or local, is a necessary condition for the existence of any great society. Beyond the issue of efficiency and effective service delivery is the issue of coping with catastrophes, hazards and disasters, particularly floods. Despite local, national and international efforts at flood mitigation and control, flood continues to be a significant challenge to humanity; it is on record that flood is the commonest of all the hazards that have ravaged humanity (Adefisoye, 2007). In an attempt to address these challenges, the United Nations puts in place the sustainable development goals (SDGs).

The United Nations' Sustainable Development Goals (SDGs) are 17 objectives that all the 193 UN member states have agreed to achieve by 2030 (UN, 2015). SDGs, otherwise known as Global Goals, are a set of objectives within a universal agreement to end poverty, protect all that makes the planet habitable, and ensure that all people enjoy peace and prosperity, now and in the future (Morton, David and Neil, 2017).

Improper flood management could undermine the actualisation of these goals. In order to address the challenges of flooding in Nigeria and thereby achieving some of the aims of the SDGs, there is the need for the government of Nigeria, across board, to learn from the strategies of the government of the Netherlands in their public administrative paradigm in curbing the effect of flooding in their country (Slomp, 2012). To this end, this paper will present an overview of the SDGs and the challenges posed by flooding. It will chronicle some of the trends in the incident of flooding in Nigeria. The theoretical framework suitable for flood management in Nigeria and in the Netherlands will be examined and the paper will draw out implications for effective flood management in Nigeria.

The Challenges Posed by Flooding on Some SDGs

The SDGs are summed up to 17 goals which are linked to five critical areas - people (Goals 1-6); planet (Goals 13-15); prosperity (Goals 7-12); peace (Goal 16); and partnerships (Goal 17) (United Nations, 2015; Morton, 2017; Woodbridge, 2015). These are often referred to as the "5Ps." Flood management is not

listed in the SDGs; however, it spans several of the SDGs (Binns, 2022). Some of the challenges posed by flooding to the actualisation of SDGs include:

- flooding and Goal 1(No poverty) - Flooding heightens the existing poverty (Echendu, 2020);
- flooding and SDG 2 (Zero hunger) - In Nigeria, flooding negatively influence the agricultural sector, which is essential in ending hunger (Echendu, 2020);
- flooding and SDG 3 (Ensuring healthy lives) - Flooding is a typical time for epidemics of water-borne, fatal diseases like malaria, typhoid, cholera, and dysentery (Echendu, 2020);
- flooding and SDG 4 (Quality education) - Flooding hinders children's right to education since they relocate children from their homes at a critical time in their education (Mudavanhu, 2014; Kousky, 2016; Echendu, 2020);
- flooding and SDG 6 (Clean water and sanitation) - These fundamental rights are compromised by floods, which result in various types of water contamination and damage to sanitary infrastructure, which affect the population's health (Raimi, Vivien, Odipe, & Owobi, 2018; Chanda, Parvin, Biswas & Shaw, 2010; Echendu, 2020);
- flooding and SDG 8 (Decent work and economic growth) - Flooding obliterates people's sources of income, undermines this objective (Echendu, 2020);
- flooding and SDG 11 (Sustainable cities and communities) - Communities at risk of flooding cannot be sustained by human habitation (UNDP, 2016; Echendu, 2020);
- flooding and SDG 14 (Life on water) - Flooding affects how effectively water resources are used for sustainable development (UN, 2016); and
- flooding and SDG 15 (Life on land) - Flooding affects the ecosystem's natural flora, fauna, and human and animal life (UN, 2016; Izah, 2018). If flooding is properly managed, it will enhance the actualization of some of the laudable SDGs discussed above.

Trends in the Incident of Flooding in Nigeria

Flood has become a major problem in Nigerian cities since the first flood hit Ibadan, the headquarters of Old Western Region, Nigeria (now the capital of Oyo State), in 1948 (Etuonovbe 2011). The Nigerian Emergency Management Authority (NEMA) in 2012 states that the country witnessed its worst flooding incidents that wreaked severe havoc on the populace. Assessment reports on the incidents showed that 33 out of the 36 states of the Federation were affected in various degrees: 7 million people were directly affected; 363 people died, and the country lost about 2.7 trillion naira to the deluge (NEMA, 2013). This statistic was from 2012 and in 2022.

Corroborating the experience of the 2012 flood in Nigeria, Amangabra and Obenade (2015), Egbenta, Udo, and Otegbulu (2015) opine that it was estimated that Nigeria suffered combined losses of more than $16.9b in damaged properties, oil production, agricultural and other losses due to flood events in 2012 alone (Komolafe, Adegboyega, & Akinluyi, 2015). Many reasons have been attributed to Nigeria's flooding over the years. Some of the causes of flooding in Nigeria could be attributed to climate change, which has led to more rains with other consequences. FlooNigeria's flooding is primarily human-induced and exacerbated by human-nature interactions. These interactions include, but are not limited to, poor or non-existent drainage systems; inadequate and poorly maintained drainage networks which have been identified as a significant contributory factor to the increased frequency of urban flooding in Nigeria (Dalil, Yamman, Husaini, & Mohammed, 2015; Ocheri & Okele, 2012; Kolawole, Olayemi & Ajayi, 2011; Abaje, Ogoh, Amos, & Abashiya, 2015). Other causes of flooding include: poor waste management system (Echendu, 2020); poorly planned and managed urbanisation process (Echendu, 2020; Adedeji, Odufuwa & Adebayo, 2012; Abaje et al, 2015; Dalil et al, 2015; Odufuwa, Adedeji. Oladesu, & Bongwa, 2012; Inyang, 2014; Ezeji, 2015); weak implementation of planning laws (Echendu, 2020); corruption (Echendu, 2020; Oladokun & Proverbs, 2016); global warming and climate change (Adefisoye, 2017; Santra, 2013); heavy precipitation (Rigasaa, Ekanem & Badamasic, 2015; Erekpokeme, 2015); failure of dams, levees, retention ponds, or other structures that contain water (Rigasaa et al, 2015); poor implementation of government policies by agencies (Okoli & Nwokolo, 2022); and poverty and insecurity (Lame & Yusoff, 2015; Ike & Uzokwe, 2015; Oladokun & Proverbs, 2016; Adelekan, 2010; Douglas, Alam, Mahgenda, Mcdonnell.

Mclean & Campbell, 2008). Aside the causes, flooding has grave consequences all over the world (Arrow, Becker, Ostrom, Schelling. Sen & Solow, 2010). In Nigeria, the consequences include homelessness and internal displacement (Johnson-Salami, 2022); polluted water and diseases (Adefisoye, 2017); deaths and destruction of properties (Johnson-Salami, 2022); economic challenges for farmers and transporters, increase in the price of goods and services, inflation (Erekpokeme, 2015; (Okoli & Nwokolo 2022); educational challenge; and psychological trauma. These are some of the consequences of flooding on the people and the country as a whole.

Theoretical Framework

The *Allgemeine Systemlehre* (general theory of systems or, more popularly, General System Theory (GST)) was advanced by Ludwig von Bertalanffy (Von Bertalanffy, L. 1968). Although he first presented his idea of a 'General System Theory' in a philosophy seminar at the University of Chicago in 1937, it was only after World War II that his first publications appeared on this subject. The outcome of the publication was seen by the 1960s whereby system thinking was recognised as a paradigmatic effort at scientific integration and theory formulation on the trans-disciplinary plane. This is so because Kenneth Boulding came into contact with the work of von Bertalanffy during the 1950s when he was conducting a seminar on the integration of the social sciences, and in 1954, together with a mathematician, Anatol Rapoport, and a physiologist, Ralph Gerard, von Bertalanffy and Boulding came together at the Palo Alto Centre for Advanced Study in the Behavioral Sciences (Laszlo & Krippner, 1998). The theory could be advanced across different fields of endeavour, including management.

The General System Theory asserts that an organisation is an open system of interconnected and interdependent parts that interact as sub-systems. The implication of this is that success of any organisation is based on interaction and collaboration between the sub-systems and external components. Characteristically, General System Theory involves:

I. Sub-Systems - there are sub-systems within every organisation, and they are intertwined.
II. Holism - different parts of any organisation work together in unison for the organisation's good and affect the overall output of the organisation.
III. Synergy - the different units working together create more significant outputs than independently.

The theory envisions the organisation comprising five components:

1. Inputs - raw materials, human resources, capital, information, and technology;
2. A transformational process - employee work activities, management activities, operations methods;
3. Outputs - products or services, financial results, information, human results;
4. Feedback - results from outputs influence inputs, and
5. The environment - these components comprise internal and external factors affecting the system (Laszlo & Krippner, 1998).

These are crucial in creating organisational synergy towards flood control in Nigeria.

Flood Management in Nigeria

Over the years, Nigeria has established agencies saddled with the task of disaster risk management. However, the recurring flooding and its associated devastations in Nigeria suggest the existence of institutional gaps and inadequacies in Nigeria's efforts to deal with flooding and other climate-related disasters. One significant institutional gap in Nigeria's attempt to address flooding is the need for more disaster risk prevention and reduction capacity (Okoli & Nwokolo 2022). A review of critical institutions saddled with the task of disaster risk management in Nigeria suggests that, while they focus on early warning signals and ex post facto response to disasters, they need more capacity and focus on putting in place disaster risk prevention and reduction.

Three such institutions are worthy of mention here:

a) The National Emergency Management Agency (NEMA), established in 1999 (Okoli & Nwokolo 2022): The NEMA Act also established the State Emergency Management Committee for each of the 36 states. As specified in its establishment Act, the core functions of NEMA border on ex post

facto responses to disasters with a focus on search and rescue, relief and rehabilitation, and refugee management.

b) The Nigerian Meteorological Agency (NIMET), established in 2003. It provided an early warning on climate-related disasters, including flooding across the country (Okoli & Nwokolo 2022). However, it lacks the institutional capacity and mandates to prevent flooding even when it predicts imminent flooding.

c) The Nigeria Hydrological Services Agency (NHSA) was established in 2010 to maintain Nigeria's hydrological stations, carry out groundwater exploration and assess Nigeria's surface and groundwater resources (Okoli & Nwokolo 2022). However, the NHSA has not been equipped with the capacity to prevent imminent flooding in the country.

The absence of disaster risk prevention and reduction capacity of the institutions saddled with climate-related disasters such as flooding in Nigeria undermines the capacity of Nigeria to adequately prevent and reduce the incidents of flooding and its impacts.

After the 2012 floods, institutions and government agencies saw the need to implement adequate flood prevention measures. Some well-meaning agencies also contributed farming inputs to help farmers restart their lives after the devastating flood (Erekpokeme, 2015). All of these measures help the affected people with their means of livelihood but never solve the flooding problem in Nigeria. There is a need for the government of Nigeria, across all tiers, to learn from other nations that have been able to have a solid plan and structure on ground in managing floods in their country; one of such nations is the Netherlands.

Flood Management in the Netherlands

Over half of the land area of the Netherlands is below the sea level, and in the southwestern part lays the marshy delta of three big rivers; the Rhine, Meuse and Scheldt. Sixty per cent of the surface area of the Netherlands is at risk of flooding – along canals, rivers and lakes; by implication, the Netherlands is susceptible to flooding due to its topography. As a vulnerable country, the Netherlands, with its over 55% flood-prone area, is among the front-runners that pay attention to climate change and sea level rise, and put lots of effort into analysing the problems and developing adaptation policies (Klijn, Karin, De Bruijn, & Kwadijk, 2012). The government of the Netherlands adopts a "multi-layer safety concept" for flood risk management in her country.

Flood management can be separated into three layers:

1) Spatial planning issues, reducing the impact of flooding through spatial planning measures, not building in flood-prone unprotected areas, or through building codes (adapting houses to regular flooding, raised houses or floating houses);
2) Flood defences to help reduce the probability of failure of flooding and
3) Flood forecasting involving alerts, evacuation, response and recovery (civil protection issues). Most of these issues are organisational, some issues like identifying, checking, repairing/restoring and signalling evacuation routes are physical measures (Slomp 2012).

One of the strategies adopted by the Netherlands government is Spatial Planning. Since 1996 all construction in the flood plain has been prohibited for the Rhine and Meuse Rivers up to the Estuary and the city of Dordrecht. In 2009 the Zwarte Water, Zwarte Lake and the enclosed estuaries of the Rhine and Meuse Rivers were included. All buildings along lakeshores and coasts must be raised on stilts or artificial mounds and flood-proofed. Some experiments were carried out with floating houses at Rotterdam and Amsterdam—the most restrictive rules on spatial planning concern the shores and banks of waterways managed by Rijkswaterstaat (Slomp, 2012). Furthermore, the Netherlands government also put in place the flood defence mechanism. The government of the Netherlands in defending their coastal cities against flooding constructed dikes and dams. A dike typically runs along or parallel to a body of water, such as a river or a sea, a dam runs across or through a body of water. A dike has water only on one side; a dam has water on both sides. The primary purpose of a dike is to protect the land behind it from flooding (closing dike) whereas the purpose of a dam is to retain the water. The 150 km of new dikes built along the river Meuse in 1995 and 1996 received a safety level corresponding to a return period of 50 years for design water levels in 1996 which were to be raised to 250 years through river enlargement

works (Slomp, 2012). These are measures geared towards protecting lives and properties by limiting the influx of the flood. Additionally, the Netherlands government developed four primary flood defence methods to help in protecting the lives and properties of their citizens. These primary flood defence mechanisms are: (a) Primary flood defence protecting dike rings along rivers, lakes and the sea, which are a significant hazard; (b) Barrier dams and additional infrastructure as a continuous lines of flood defences connecting dike rings; (c) Protecting dike rings along rivers, canals and lakes which are minor hazards or dikes separating two areas with different safety standards (e.g. 1250 and 2000 years as return periods); and (d) Primary flood defence which partially protects Dutch dike rings that lie in Belgium or Germany and are formally outside the Dutch control (Slomp, 2012). Invariably, cooperation from other nations is very germane.

The Netherlands has a solid legal framework for funding against flooding. The parliament adopted a plan in 1996. The plan was called "Delta plan Large Rivers" in Dutch "Delta plan Grote Rivieren, DGR" (Slomp, 2012). Almost 1000 kilometres of river dikes were reinforced and 150 km of new dikes were built along the Meuse River. After the second flood defence assessment period which started in 2006 and ended in 2012, third or a new reconstruction programme (2011-2023) was formed. This project was estimated to cost about 5 to 8.5 billion Euros (Slomp, 2012). This indicates that proper funding is crucial in addressing flooding by any government interested in curbing the menace. Moreover, the government of the Netherlands is into flood forecasting and flood alerts to help sensitise her citizens. Warnings by the Hydro-Meteo centres are computer generated and emailed to water boards (regional water authorities) and Rijkswaterstaat in coastal areas. The Water Management Centre of Rijkswaterstaat in Lelystad is responsible for sending out the storm surge and flood warnings as well as matching the different input from the regional centres (Slomp, 2012). Air raid sirens are used to alert the population. The local radio and television networks inform the inhabitants about the impending danger and they are provided with an annual fee for this service (Slomp, 2012). The Ministry of Security and Justice regularly informs the public in public information campaigns on different risks. They have a website (www.crisis.nl) which updates the public during and before a crisis. Using the cell broadcasting system "NL Alert", all mobile phones in a specific geographic area can be reached. Information to the public always passes through the local authorities responsible for public safety (the mayor) or the national authorities responsible for public safety (Minister of Security and Justice) (Slomp, 2012). All hands must be on deck across the tiers and arms of the government of any country for effective management of flooding in their country.

Implications of Flood Management in the Netherlands for Effective Flood Management in Nigeria

There are challenges facing flood management in Nigeria. The following lessons can be learnt from the Netherlands towards flood management:

1. *Spatial Planning*

One of the challenges faced in Nigeria which is also a contributory factor to flooding in the country is poor or lack of spatial plans. The government of the Netherlands has a strict restrictive rule in spatial planning. In Nigeria, people find it convenient to build wherever they like, and the rules for town planning in Nigeria are seldom enforced or obeyed. In the Netherlands, buildings along lake shores are raised on stilts or artificial mounds and are flood protected while, in Nigeria, many people that are living in the riverine communities especially in the Niger Delta regions and some towns in the southwestern parts, (fishing communities), have little or no knowledge on how to protect their properties from flood. Hence, there is a need to take a cue from the Netherlands for how such homes should be constructed so that it would not damage the houses when floods come.

In the Netherlands, there are agencies saddled with the responsibility of managing their waterways, constructing quality assurance, and maintaining dams and dikes. Nigeria also has some agencies in charge of flood control but there is a need to define roles and responsibilities clearly because there are a lot of bulk-passing and shifting blame. Often times, no agency wants to take responsibility for a failure. In light of the General System Theory (GST), there is a need for all the different government agencies to synergise their efforts in confronting the challenge of flooding in Nigeria. Each agency should be seen as a sub-

system working together for the general good of the people instead of working separately with so many bureaucratic hurdles that negatively influence the effectiveness of these agencies.

2. Flood Defence Mechanisms

In the 2022 reports on flooding, the issue of building holding dams came to the fore, and this would mitigate the challenge of flooding when the dam in the neighbouring countries are opened. The Netherlands government-built dikes and dams for defence against flood invasion. The Nigerian government, through her agencies, must, as a matter of urgency, build dikes and dams because the nation has a lot of coastal cities. It is important for Nigeria to have solid concrete embankments to protect the coastal cities. In contemporary times, serious issues have been raised about the need for Nigeria to have such holding dams and dikes for defence in case of flooding.

One of the challenges confronting government agencies in Nigeria is corruption. Often times, budgets are being released for one project or the other; such funds end up in the private purse of individuals. The aspect of quality assurance is germane. In Nigeria, many contractors do substandard work, and after commissioning such projects, they do not stand the test of time. The contractors complain that government agencies request specific percentages from the funds allocated for such projects. In order to address this perennial problem of flooding in Nigeria, quality control is sacrosanct. Lack of maintenance culture also contributes to infrastructural decay in Nigeria. In the Netherlands, they have policies for periodical maintenance of infrastructures for optimum performance. There is a need for government agencies in Nigeria to imbibe this culture.

The Netherlands government is proactive and has long-term goals for flood management. The Nigerian government reacts to issues but must learn to be more proactive. In some cases, the government responds when the disaster has subsided and this is in form of organising seminars, gathering reports, making promises, and at the end, nothing comes out of it. The cycle continues when another flood is recorded in the future. The government of the Netherlands is already projecting into decades and thousands of years, showing a visionary government that has the interest, the lives and properties of the people at heart. The Nigerian government should learn from the Netherlands to safeguard the country and protect its future. There is synergy for effective flood management in the Netherlands because all government agencies work towards the common goal. Due to the 2022 flooding in Nigeria, there have been many allegations and counter-allegations across government agencies, between the federal and some state governments. There is a need for maximum cooperation across the board to salvage the situation and saving people's lives and properties. All government agencies should have an active and proactive presence in all the states and relate to local government areas. If politicians could visit as many wards as possible during the electioneering campaign, it should be possible for proactive measures to be taken to handle the challenge of flooding that affects many communities in Nigeria without passing the blame or accusing one another. Another lesson from the Netherlands government is the issue of adequate legislation in terms of laws guiding the operation of government agencies to address the menace in their country. In Nigeria, there are laws about environmental protection. These government agencies such as NEMA, NIMET, NHSA, have laws backing up their existence with specified responsibilities, but the laws should not only be seen on paper but should translate into positive action. If there is the need to amend such laws in order for them to be very effective, it should be amended based on current realities for effective performance.

Adequate funding for research and proactive steps are evident in the Netherlands. Hence, the Nigerian government should effectively fund projects geared towards addressing flooding in Nigeria. The government must make budgetary provisions for these agencies to perform their statutory responsibilities. There should be an oversight functions by the legislative arm to ensure that the funds are put to practical use. The corruption issue should be reduced to the barest minimum, and the anti-corruption agencies must be active to ensure that the funds allocated for projects that would address the perennial flooding in Nigeria are properly utilised. The Netherlands government is in an effective partnership with the government of neighbouring countries such as Germany and Belgium. Partnership with neighbouring countries is essential for effective flood control. In Nigeria, the reported agreement with the government of Cameroun must be honoured, and Nigeria must, as a matter of urgency, see to it that the holding dam that was agreed upon is constructed. This is a reflection of the fact that there is a

need for collaboration between Nigeria and her neighbours regarding flood control. There are agencies such as the Lake Chad Basin created by the government of different countries to foster relationships and jointly address challenges confronting the sub-region. Addressing flooding should have a multi-national approach, and collaboration is germane.

In light of GST, environment, input, process, output, and review are essential. For effective flood management in Nigeria, there is the need for Nigeria to understand her environment by the way of geographical location and work with other countries in the same environment by making proper inputs, and following transformative processes so that the expected result would be achieved. The management of recent flooding should be reviewed to address the inadequacies in order to forestall future devastating consequences.

3. Flood Forecasts, Alerts and Evacuation

The government of the Netherlands is on its toes when it comes to flood forecasts. In this regard, NIMET, as an agency of the Nigerian government, should always be proactive in disseminating necessary information that will help Nigerians prepare ahead of any flooding especially those living in flood-prone places. There is a need for such information to be disseminated via all mass and social media. During the COVID-19 awareness and sensitisation, text messages were sent to the telephone numbers of Nigerians to underscore the importance of such information and for Nigerians to take precautions. The response was massive; the same strategy could be adopted in sending flood alerts using electronic, print and social media. The flood alert can also serve as a means of educating the people on what to do when their environment is flooded.

Flood evacuation strategies are already in place in the Netherlands but the case is different in Nigeria. The flood comes, many people die, properties are destroyed, and the government responds late. Oftentimes, IDP camps are set up with inadequate preparation for the people. These camps are always in schools with little or no facilities that would help the displaced to settle in. if there had been a prompt response, many properties and lives would have been saved. The GST made it clear that synergy cannot be circumvented towards effective flood management in Nigeria. Government agencies saddled with information and national orientation must partner with other environmental and disaster management agencies in addressing the perennial flood disaster. This synergy must be with the aim of individuals within the sub-systems making inputs that would generate the right output regarding Flood Forecasts, Alerts and Evacuation.

Conclusion

Flooding is a yearly occurrence in Nigeria and is expected to increase due to climate change. The Federal government of Nigeria failed to heed early warnings by relevant agencies and was unprepared to manage the 2022 flood, which became one of the country's most devastating floods. Efforts towards mitigating the adverse effects of flood have mostly bordered on treating the symptoms rather than addressing the root causes. Lives, properties, means of livelihood and investments are being lost due to the devastating effect of the flooding. The federal government has made some efforts to mitigate floods, but more is needed.

Setting up the early warning system is a good development, but there is a need to sensitise the people to heed early warnings. People should desist from blocking waterways and building on flood plains. The government should be proactive and invest massively in flood mitigation methods such as dam building, dredging rivers, clearing of drainages and natural waterways etc. Finally, relevant flood prevention agencies should be well funded and the funds carefully monitored to avoid mismanagement; all of these strategies were obtainable in the Netherlands and are working for them; they could work for Nigeria if the government and her agencies are willing to do the needful.

Recommendations

Given the reviews, surveys and lessons learnt on flood management, the following recommendations are put forward:

1. There is a need for government agencies in charge of town planning and the Nigeria Hydrological Services Agency (NHSA), to carry out their responsibilities in preventing people from building in areas prone to flooding and on waterways.
2. The indispensability of synergy must be amplified and appropriated if effective flood management would be achievable in Nigeria.
3. There is a need for government agencies to be proactive in order to prevent or minimise the devastating impact of flood in the future.
4. NIMET, as an Agency of the Nigerian government, should always be proactive in disseminating necessary information that will help Nigerians prepare ahead of any flooding especially those living in flood-prone places.
5. Government agencies must respond promptly to avert the destruction of lives and properties.

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