ASSESSMENT OF GOVERNMENT RESPONSE TO FLOOD DISASTER IN KEDE FLOODPLAIN IN MOKWA LOCAL GOVERNMENT AREA, NIGER STATE

Kede floodplain is under constant threat of devastating floods annually. The rural dwellers adopted strategies and even the government have developed the National Disaster Management Framework (NDMF) through the National Emergency Management Agency (NEMA) to respond to the issues of disaster risk but substantive success has not been attained. This research seeks to examine the government response strategies to flood disaster in Kede floodplain community with a view of making recommendations to enhance flood risk reduction and management. The study assesses the trends of occurrence of flood disaster in the community; examine the response strategies adopted by the people and evaluate the implementation of the National Disaster Management Framework (NDMF) of NEMA in the study area. Quantitative data gathered for this research was interpreted using descriptive statistics to achieve the research objectives. The study recorded an aggregate of 340 respondents representing 90% who indicated that the early warning response by government has not reduced loss of human lives and assets to flood, while 10% agreed that it has reduced them. The study also discovered poor response by government in the maintenance and upgrading of infrastructure where 86.8% insist there is no maintenance and upgrade on damaged community infrastructures while, 13.2% who cited the world bank RAMP project on few roads claimed there are maintenance. The research also revealed that 95% of the respondents claimed that government does not presently have any prevention, preparedness and mitigation plan or arrangement for the flood prone area while, only 5% of the respondents claimed they have the required prevention, preparedness and mitigation plan on ground. The findings of the study have shown that government response to disaster risk reduction in Kede floodplain area is grossly inadequate and this is key to building a resilient community. The absence of key government response in Kede has weakened the local governance and aggravate their risk and vulnerability of rural livelihoods. Hence, the study recommends that building the technical capacities of the people for DRR at local government level and promoting Community-based strategies on disaster risk reduction.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background to the Study

Floodplains are land lying low next to rivers. They present several advantages to people especially the rural dwellers whose livelihoods depend on fishing, arable farming, freshwater for livestock rearing and human. Unfortunately, settlements that are located near to floodplains experience devastating flooding because of the impacts of environmental change (Vidal and Radford, 2005).

With the current challenges of climate change, flooding has been seen as a major environmental challenge in several parts of the whole world. Globally, mortality rate in the event of flood and other natural disaster has reduced because of the use of early warning system mostly in the global north, however, many of the third world nations still experience increase in deaths resulting from flood. This is because of the magnitude to which settlements in third-world countries are exposed and vulnerable to flood (Komolafe *et al.*, 2015). According to Kron (2005), flooding accounts for about half of the global natural disaster fatalities and one-third of its economic losses. Flooding has since been designated as a major disaster in most developing countries of the world.

According to the World Meteorological Organization (WMO, 2020) no one can claim ignorance of flood as a phenomenon. Howsoever, it is additionally obvious that natural risks, for example, floods and dry seasons can't be annihilated, be that as it may, an ideal and precise suggestion of hydro-meteorological will assist people to getting ready for, mitigate hazards and decrease disruptions that can have negative impact to infrastructures and livelihoods. Flood is the most havoc wrecking catastrophic event affecting numerous world regions

annually. According to the WMO, there has been a dramatic rise in the danger brought about by floods during the previous decades generally as an outcome of the impacts of climate change. The Nigeria nation is not left out in the trend and has witness many flood disasters. The most outstanding occurrences are 2012 and 2018 destroying floods in which numerous lives were lost, property destroyed and general disturbance of business with unfavorable loss of livelihoods.

Nigeria has witnessed a series of floods disasters in the past few decades (Amangabra and Obenade, 2015). The occurrence and intensity of floods in Nigeria are more pronounced in the floodplains of river Niger, river Benue and other major rivers, as well as the coastal parts of the country. According to the National Emergency Management Agency (NEMA, 2010), the national annual losses caused by floods, over the last decade ranges between $9.6billion and $18.4billion. The 2012 flooding event, for example, cost an estimated loss of $16.9b worth of properties and investments (Amangabra and Obenade, 2015). This kind of disaster has created serious devastation on both urban and rural populaces in the country. The responses from the governments of Nigeria, over the years, have been mainly reactionary.

The International actors, civil societies and governments in 2005, came together under the umbrella of the United Nations International Strategy for Disaster Reduction (UNISDR) and developed a disaster risk reduction framework known as Hyogo Framework for Action (HFA) and later the African Regional Strategy for Disaster Risk Reduction and its Plan of Action (ARSDRR) 2010 which makes its practice easy for all African countries in the governance of disasters and their risks. By the year 2015, The Sendai Framework (2015-2030) was developed as a legal document to succeed the Hyogo Framework for Action (HFA) 2005-2015. Nigeria has been a member of the conferences that brought about these

frameworks and is also a signatory to many of them, nevertheless, the effectiveness of her reducing the risk of disasters has been adjudged unsatisfactory thereby calls for in-depth assessment of the system (Nkwunonwo *et al.,* 2016).

Governance is a fundamental factor in disaster management endeavours (UNISDR, 2004). A good governance is anticipated to embrace disaster risk reduction through policy development, allocation of resources needed to achieve the set policy, ensure policy implementation and give an account of failures in addition to ensure that relevant stakeholders participation is not weakened (UNISDR, 2004). For a nation to attain a desired disaster risk reduction status, it requires a strong national governance on disaster management with an established dedicated local governance (Williams, 2011). In the Nigerian context, Oladokun and Proverbs (2016) argue that although the recent increase in flood incidence has increased levels of awareness; however, flood risk governance activities in Nigeria and its integration into governance systems and processes are still crude.

Across the globe, central governments of numerous nations are discreetly imparting more capacity to subnational practitioners in managing disaster risk (O'Neill, 2005). Most Disaster Risk Management routine include grassroots organization and implementation, and the international bodies call for the decentralization of power and assets to advance local area level disaster risk reduction. However, decentralizing duties can likewise have adverse outcomes if local governments can't dole out resources or devoted staff with sufficient specialized skills (Pelling, 2003; Scott and Tarazona, 2011). In Latin America, many nations with whom have channel resources in the devolution their central mechanisms of Disaster Risk Management in the last ten years, for instance Colombia and Nicaragua, still battle with lacking municipal government know-how and funding (Hardoy *et al.,* 2010). About 900 of

Colombia's 1,098 regions have commanded neighborhood councils for disaster risk reduction, however just 14% executed crisis and emergency courses of action. The same case is what is obtainable here in Nigeria and many other African countries; where local government institution is weak. Hence, in order to achieve effective flood disaster risk management good governance at local level is seen as a veritable tool.

1.2 Statement of the Research Problem

The reoccurring nature of flood hazards around the world has increased human and economic losses. Rabindra (2008) indicates that the majority of flood disasters' victims are poor people of developing countries, who suffer most and are the first causalities of such incidents. Flooding wreak havoc on homes and business activities; damage roads and communication routes, crops and agricultural land, disrupt drainage and sewage systems, presenting a serious health hazard resulting from pollution and water borne-disease and even death (Ebuzoeme, 2015). Flood impacts on people's livelihood is a very serious one, particularly on the rural dwellers whose main sources of livelihood are farming, livestock rearing and fishing. These poor families on floodplains, will either lose their lives and or assets they have accumulated over years when disaster strikes (Gulsan *et al.*, 2016).

Kede communities are among the sub-tribes that make-up the Nupe Kingdom in Niger state. They are located on the flood plain of River Niger and are predominantly engaged in fishing activities. Flood plains are of special importance to rural communities, as they offer favorable conditions for agrarian economy of the people. However, these areas are under constant threat of floods. Flash-floods occur almost every year in Kede when the water level of the Niger River rises a few meters above the danger stage. The factor influencing the occurrence of the

flood is probably the pattern of monthly rainfall during the month of September to November. The flood many a times displace the communities and destroy farms and properties.

Flooding and other natural disasters are global phenomena; in response to which governments across the world met severally to develop policy frameworks between 1994 and 2015 to find a lasting and sustainable ways of managing disasters and climate risks (Kamara *et al.*, 2019). The Federal Government of Nigeria also established the National Emergency Management Agency (NEMA) in 1999 which also developed National Disaster Management Framework (NDMF) to address the issues of disaster risk but substantive success has not been recorded in Kede floodplain community. Hence, the need to assess government response strategies to flood disaster in Kede floodplain community with a view of making recommendations to enhance disaster risk reduction and management.

1.3 Research Questions

This research has help to answer the following research questions:

i. What is the trend of occurrence of flood disasters in Kede floodplain community?
ii. What are the response strategies adopted by Kede floodplain community?
iii. How has the implementation of National Disaster Management Framework (NDMF) of NEMA responded to flood disaster in the study area?
iv. How has the disaster governance system reduced risk in Kede floodplain community?

1.4 Aim and Objectives of the Study

The aim of the study is to examine the governance response strategies to flood disaster in Kede floodplain community with a view of making recommendations to enhance flood risk reduction and management.

The objectives of the study are to:

i. assess the trends of occurrence of flood disaster in Kede floodplain community;
ii. examine the response strategies adopted by Kede floodplain community;
iii. evaluate the implementation of the National Disaster Management Framework (NDMF) of NEMA in the study area; and
iv. assess the impact of the disaster governance system in reducing risk in Kede floodplain community.

1.5 Scope of the Study

The spatial scope of this research is the extent of Kede district, comprising of floodplain communities on the southern part of Mokwa local government area, Niger State.

On the temporal scope of the study, the research covers ten years (2010 – 2020) period of flood analysis in the study area and governance response strategies adopted. It also focuses on the Disaster Risk Governance structure of Kede district; using prevention/mitigation (preparedness before disaster), response measure (during disaster) and recovery and resilient measures (after disaster "Build Back Better").

1.6 Justification for the Study

It is no doubt that daunting challenges of climate change and its resultant effects of global warming and flooding are fast ravaging many human settlements across the globe. This work

with the aid of its response strategy assessment will be relevant in providing useful information regarding disaster risk governance and strategies to reduce the effect of any form of flood hazard within human settlement particularly the floodplain areas. Also as the disaster risk reduction campaign is becoming more necessary, the very high rate of involvement of every sector of the stakeholder will assist in the area of awareness, preparedness, prevention and mitigation.

1.7 The Study Area: Kede in Context of Mokwa Local Government, Niger State

Kede district zone is located on the Southern part of Mokwa local government, the area lies between Latitude $5^{o}\ 0^{I}$ N and $5^{o}45^{I}$ E and Longitude $9^{o}15^{I}$ N and $8^{o}\ 45^{I}$ N. The study area is a long stretch of land of about 102km, adjoining river Niger and on which thirty-two (32) villages are located; with the total land coverage of 600. 9sq.km (see figure 1).

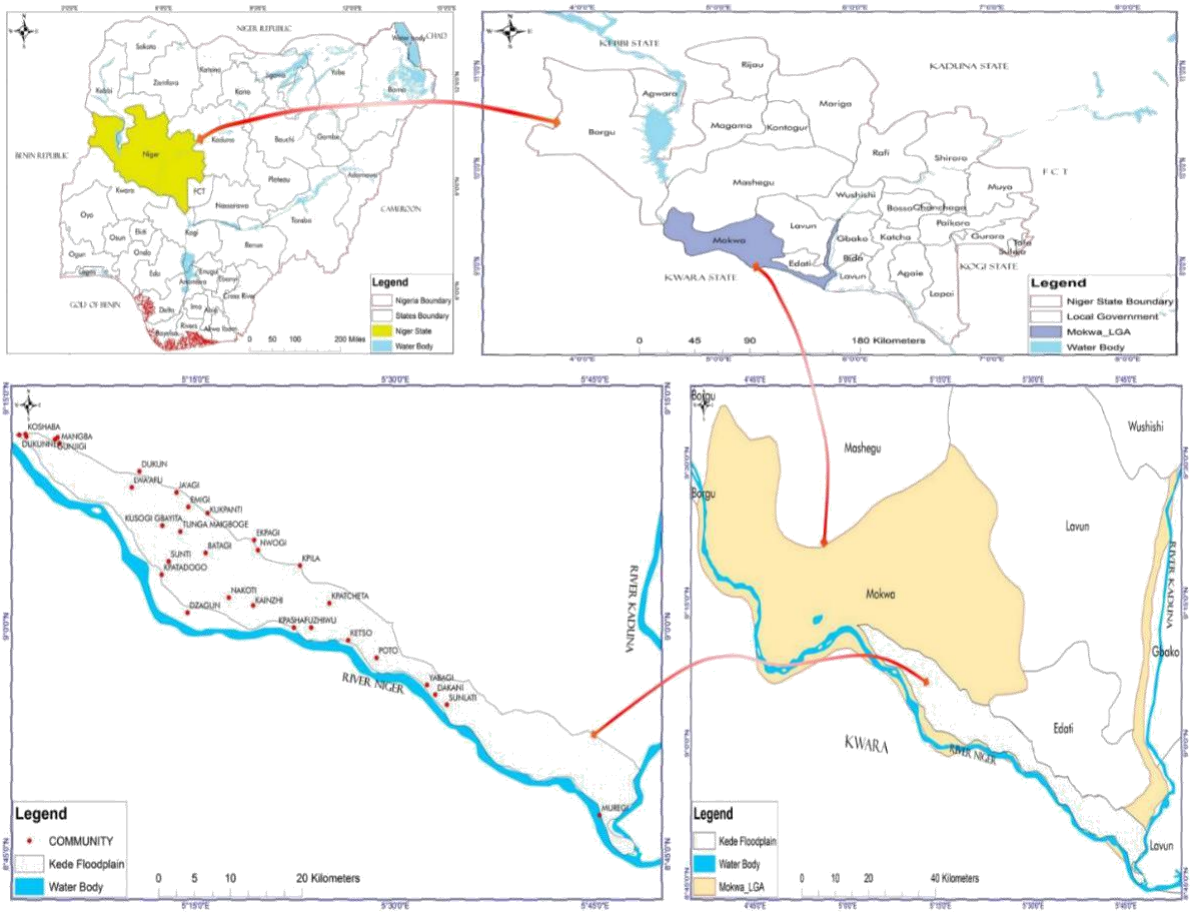

Figure 1.1: Kede floodplain in Mokwa, Niger State, Nigeria

The flood prone communities extend from Rabba Koshaba in the South-Western part of Mokwa LGA, to Muregi on the South-Eastern; as well as all the villages within the two. This area of the state has been a major flash point of flood disaster over the years. In spite the economic importance of Kede floodplain, as the area offer a vast expanse of arable land for all season farming; and also offer favorable conditions for fishery and other riverine businesses; the area is bedeviled with an unabating flood incidents.

1.7.1 Climate and meteorology

The climate of Nigeria is influenced by seasonal changes of two air masses which blow over the country. These are the cold dry dusty tropical continental air mass and the associated

harmattan winds that originate from the Sahara Desert on one hand, and the warm humid Tropical Maritime (MT) and the associated South-West monsoon winds which originate over the Atlantic Ocean on the other hand (NiMet, 2021). The Inter-Tropical Front (ITF) or Inter-Tropical Discontinuity (ITD) separates the two air masses. The weather condition experienced at any given location in Nigeria during any period of the year is determined by the position of the ITD.

1.7.2 Rainfall, relative humidity and temperature

Niger State according to Ayinde *et. al.* (2013) experiences distinct dry and wet seasons with annual rain fall varying from 1,200mm in the northern part to 1,600mm in the southern parts which ranges between 150 and 210days of rain or even more. The maximum temperature (usually not more than 608^{o}F) is recorded between March and June, while the Minimum is

usually between December and January (usually not more than 482^{o}F). Generally, the fertile soil and hydrology of the State permit the cultivation of most of Nigeria's staple crops and still allows sufficient opportunities for grazing, fresh water, fishing and forestry development. The generally high temperatures of the area are typical of its tropical location. Air temperatures range from 24.5^{o}C - 37.0^{o}C in the rainy season increasing to between 33.0^{o} and 39.0^{o}C in the dry season.

1.7.3 Description of vegetation

According to Bununu *et al.* (2013) who claimed that Guinea Savanna as at 1976/78 occupied a greater part of the areas based on his survey. Today, the areas of the original Guinea Savanna have decreased drastically. Most of the previous Guinea Savanna areas have changed due to grazing, agricultural activities and other anthropogenic factors. In many

cases, land was intensively cropped, deforested and exposed to erosion. Generally speaking, the vegetation types discovered in the study area could be categorized thus:

i. Subsistence / fallow farmland
ii. Vegetation within and around built-up areas
iii. Gardens and parks

1.7.4 Soil

Three major soil types can be found in Niger State. These include the ferruginous tropical soils, hydromorphic soils and ferrosols. The most predominant soil type is the ferruginous tropical soils which are basically derived from the Basement Complex rocks, as well as from old sedimentary rocks. Such ferruginous tropical soils are ideal for the cultivation of guinea corn, maize, millet and groundnut. Hydromorphic or waterlogged soils are largely found in the extensive flood plain of the Niger River (Bununu *et al.,* 2013). The soils are poorly drained and are generally greyish or sometimes whitish in colour due to the high content of silt. Ferrosols which developed on sandstone formations can be found within the Niger trough (Bununu *et al.,* 2013). Their characteristic red colour enriched with a clay sub soil is noticeable in the landscape. Termite hills dot the landscape, particularly between Mokwa, Bida and Kontagora. These can be seen along the major highways in the state.

1.7.5 Land use

Land use in the area can be grouped into:

i. Rural settlements: This consists of the villages and hamlets within the study area. They are characterized by low intensity / low density residential, commercial, public and recreational uses.

ii. Agricultural: Agricultural land use (crop cultivation and animal grazing) consumes approximately 85% of land within and around the study area.

1.7.6 Community governance

The study area formation is a collection of villages/hamlets. Individuals in these villages/hamlets surrender themselves to the authority of their village heads known as Zaki. The basis of the people's submission is traditional because it is mandatory on any persons born in a community to become an automatic member and as well respect all rules of the land. Any visitor or tenant who resides there must respect same rules. Aside the village head and the village elders overseeing the affairs of the village, there are other groups such as the youth group headed by the youth leader otherwise called Sokera, farmer's group, fishermen group, market men and women groups. These groups play important roles in the flood governance system of the community.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Theoretical Framework: Evolving Disaster Risk Reduction Framework

The Sendai Framework for disaster which was endorsed during the United Nations World third kind of the conference on Disaster Risk Reduction began in March 2015 in Sendai, Miyagi, Japan. This Framework is a legal document that succeeded the Hyogo Framework for Action (HFA) 2005-2015: increasing nations resilience and their regions to disasters. During the HFA plan period national action plans are not in harmony with national policy in key development sectors and resource allocation to support existing institutional organization for disaster risk reduction is very poor (Madu *et al.,* 2019). The HFA was devised to catalyze the work done globally under the International Framework for Action for the International Decade for Natural Disaster Reduction of 1989, and the Yokohama Strategy for a Safer World: Guidelines for Natural Disaster Prevention, Preparedness and Mitigation and its Plan of Action, endorsed in 1994 and the International Strategy for Disaster Reduction of 1999.

Sendai Framework was built on the platform of the achievements made on HFA while some innovations were introduced which was the agreement during the process of negotiations and consultations. Emphasis on the achievement made was more on the movement from disaster management to disaster risk management. There are seven global targets identified for this framework including disaster risk reduction as an anticipated result and new risk prevention. Others include minimizing existing danger and reinforcing flexibility, principles guiding disaster risk reduction, and the fundamental duty of government to forestall and lessen the risk of disaster, the entirety of people and government institutions commitment. The focus of disaster risk reduction in the framework also lays emphasis on health resilience, while both

natural and human-made hazards relating to environmental, technological and organic dangers and their possible adverse outcome are thoroughly addressed (UNISDR, 2015b).

Similarly, the framework seeks to promote better understanding in all disaster risk dimension such as being exposed or vulnerable and hazard principles; fortifying governance in disaster risk at all levels; keeping accurate record in the management of disaster risk; preparedness to "Build Back Better". It also recognizes the roles of stakeholders; activation of hazard delicate venture to keep away from the production of new risk; making health facility resilient, social legacy, and work areas; reinforcing of foreign collaboration and worldwide association, and risk-informed donor frameworks and programs. Issues of monetary help and credits from international monetary foundations are as well given due attention. The United Nations International Strategy for Disaster Reduction (UNISDR) is saddled with the responsibility to support the implementation, take further actions and make a periodic evaluation of the Sendai Framework (UNISDR, 2015b).

2.2 Understanding The Ramification of Flood Disaster

This section of the research highlights the ongoing debates regarding the concepts of flood disasters, disaster risk governance, policies of the international communities and the Nigerian government. Flooding according to Kron (2005) is defined as the occupation of land by water which originally flows in their confine basin but temporarily escapes due to heavy rainfall. He identifies 3 different types of the flood namely :(1) Storm surge which is the type of flooding that happens along the coasts of seas and big lakes. It can be related to tsunamis which are the highest loss potential for both lives and properties in water-related events; (2) River floods are the consequence of heavy and consistent downpour for a few days or even a long time over enormous regions, sometimes coupled with snow-melt. The

soil is soaked and can no longer accommodate infiltration and water find its way into the rivers and creeks, build up gradually mostly in a short time and the floodplains become inundated; and (3) Flash floods which usually the beginning of a river flood, happen in smaller areas as a result of serious precipitation without inflow from other areas. When the ground is saturated and infiltration is no longer allowed the water may surge down a valley that doesn't have a stream at its base. That kind of flood can find its way very fast to several kilometers away, where the precipitation is not even noticeable. The term "flash" denotes the speed at which they happen in steep terrain, while some flat terrain can also be affected in a situation where the slope is excessively little to allow quick flow out of water. Storm-water will then accumulate on depressions which are not obvious and even the obvious depressed areas.

Vulnerability to flooding is the degree of susceptibility to flood damage, the socio-economic and ecological systems of an area in a given flood event (Frank and Volker, 2005). Adger (2000), stressed that the more exposed an element is to hazards the more it is susceptible to their impacts and forces. Any flood vulnerability analysis should, therefore, dwell more on the element at-risk indicators, exposure indicators, and susceptibility indicators (Frank and Volker, 2005).

Flood risk management's goal is to decrease the probability or potentially the effect of floods. It is a complex phenomenon although its concept is widely accepted and embraced by decision-makers to be more efficient and effective in achieving a lot of goals, against the conventional engineering approach, but the decision making practice changes from one place to another (Sayers *et al.,* 2013). Advanced flood risk management includes advance technological measures and also low-tech economical, possible measures. Investment in

social capital plays a very crucial part in the implementation of flood risk management measures (Takara *et al*., 2010). There are 3 main steps in undertaking of flood risk management and they are:

i. Flood planning mitigation measures (preparedness before the disaster),
ii. Response measures (during a disaster),
iii. Recovery (after disaster) (Nasiri *et al.*, 2016).

Flood risk management over the years has been executed through engineering controls and non-engineering control (López-Marrero and Tschakert, 2011). The engineering control includes the modification of river channels, canals, dikes, levees and flood-walls consummated by early warning systems and response plans to safeguard lives and properties before, during and after floods (Liao, 2012; López-Marrero and Tschakert, 2011). The basic principles here to follow are to store, divert and confine floods (Nasiri *et al.*, 2016). However, this method has been adjudged for endangering fluvial ecosystems and even makes flood risk worse in the long-run (Smit and Wandel, 2006). Flood control though has earlier reduced fatality but has additionally permitted and even promoted intensive occupation of flood-prone areas for industrial, big businesses and housing development and also tourism (López-Marrero and Tschakert, 2011). Hence, the emergence of the non-engineering control which involves several mitigation measures with limited modification of the river flow (Nasiri *et al.*, 2016).

These are strategies which are supported by the national policies of the nation and they include proactive flood management standards like the turn of events and redevelopment of arrangements, floodplain guidelines (including land-use planning), information spread and

public knowledge, and flood estimates and warning, communities' involvement in strategy planning and impact reduction (López-Marrero and Tschakert 2011). Figure 2.1 below shows the work-flow of the integration of the engineering and non-engineering measures in flood management.

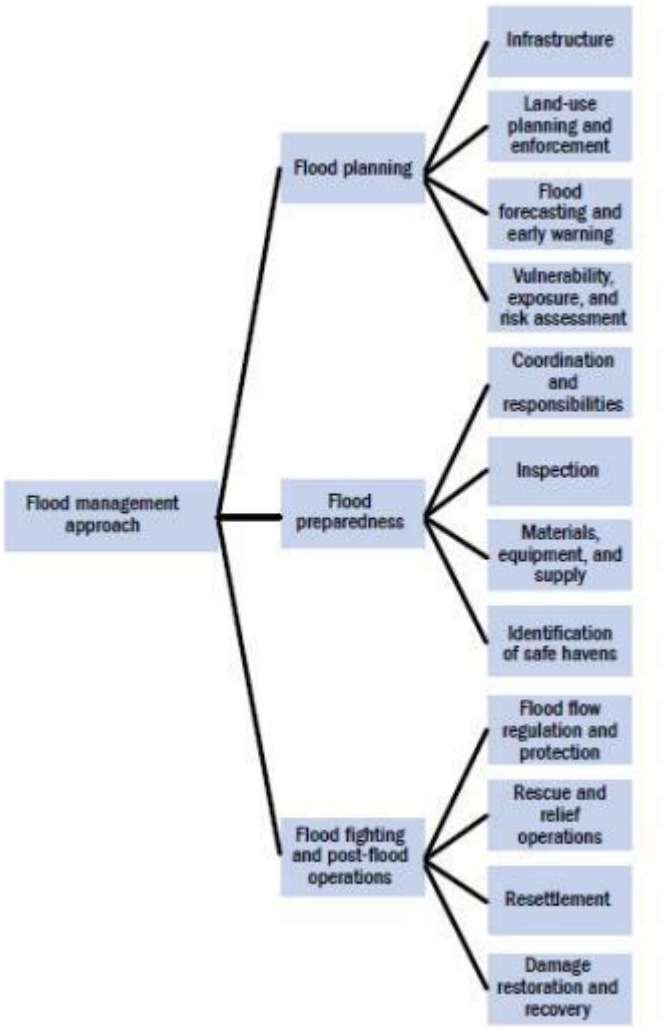

Figure 2.1: Flood Management Approach
Source: (Ali, 2013)

In Nigeria, flooding occurs annually and the trend increases every year. It has been a cause for the death and displacement of people and property destruction (Dalil *et al.*, 2014). The flood event of 2012 is tagged the worst since 1936 given the resultant devastation (Adeleye

and Ayangbile, 2015). This has charged the government on the proper management of the environment and its monitoring by making sure the hands of relevant government agencies are on deck ahead of future flooding event (Ikusemoran *et al.,* 2014). In other to tackle the menace of the annual flood disaster a broad arrangement was designed within the context of Nigeria Agenda 21 documents in 2003 for the control of floods and assistance measures to relief the discomfort of the disaster (Nabegu, 2012). Also included in the document is the enforcement of the land use laws to mitigate flooding event; building the institutional capacity to predict and create awareness through programs; and infrastructural development and maintenance to reduce the impact of floods (Nabegu, 2012). Addressing flooding which is a negative impact of Climate Change issues in Nigeria has been resting mainly on the shoulders of the aid program of International organizations (Ashley *et al.,* 2011).

Nigeria is among the highest beneficiary countries in Africa which enjoys adaptation development projects donated by the international organization (Ashley *et al*., 2011). Development projects like building flood-walls, dykes, and levies, changing from traditional agricultural practice to drought-resistant crops e.t.c were categorized under the narrow definition of adaptation (Ashley *et al.,* 2011). While on the other hand, a broader definition category holds a view that 'good development is a good adaptation,' having the opinion that in the unfortunate event of flood disaster a more resilient people or community will better cope (Ashley *et al*., 2011). Programs under this category are economic diversification, strong and improved local governance, better public education and the provision of basic infrastructure.

Despite the interventions very little has been achieved in reducing flood impact and this has been pointed as the reason Nigerian case studies on flooding are very few or completely not

available in documents of relevant flooding studies of the world with her status as the largest economy and the most populous black African Nation (Oladokun and Proverbs, 2016).

2.3 Global Discourse on Governance Response to Disaster

Disaster risk governance is derived from the concept of governance and its relationship to development and social advances as a whole (Aysan and Lavell, 2014). It is the way actors (both public and private) at all levels manage and reduce disaster and climate related risks. According to UNDP (2013), "DRG alludes to the manner by which the public authorities, government workers, media, private areas, and civil society associations; organize exercises at local area, state, public and territorial levels to oversee and reduce disaster and climate related dangers" (UNDP, 2013). It is the arrangement of adequate legal instruments, with significant degrees of capacity and resources on a decentralized premise, to capture, plan for, oversee and recuperate from disasters (Niekerk, 2015). It is relevant to have a good understanding of governance concept which will serve as a basis for the subject of discussion for disaster risk management.

Governance, according to Lassa (2010), risen up out of the improvement idea that at first saw government as the solitary dynamic force yet later added different actors to tackling development issues. As a comprehensive document in the United Nations Commission on Global Governance report 1995 governance is a system by which people and institutions, public and private, manage their common affairs (UNCGG, 1995). It is further explained to be formal institutions defined by regimes that are given the power to ensure compliance, and established informal plans that individuals and organizations have either consented to or seen to be to their greatest advantage. There are examples of governance at the local level as detailed by the same report which incorporate a local co-employable shaped to introduce and

keep a standing water pipe, a town chamber working a waste reusing plan, a multi-metropolitan body fostering a coordinated vehicle plan along with client gatherings, a stock trade controlling itself with public government oversight, and a local drive of state organizations, modern gatherings, and inhabitants to control deforestation. It also highlights governance example at the global level to include the basic relationship between the Government ministries and agencies as well as the non-governmental organizations (NGOs), citizens' movement, multinational corporations, and global capital market. Governance was also persuasively presented by UNISDR (2004) as an arrangement of qualities, strategies and establishments used by group of people to manage its economic, political and social concern by means of exchange among the private and public sector and the civil society also involving the interaction and institutions in which individuals and group of people express their concerns, carry out their legitimate rights and obligations and mediate their disagreements. The document outlined three components of Governance: economic, political and administrative.

Economic governance is the mechanism by which the government makes decisions that influence a country's economic exercises and its relationship with different economies. This has significant ramifications for value, neediness, and personal satisfaction;

Political governance is the process by which the decision to develop policies are made, including national disaster reduction and planning. The coordination of the process and how the actors are brought together will determine the quality of the policy outcomes,

Administrative governance is the arrangement of strategy execution and requires the presence of well-working organizations at the national, state and local levels. On account of

disaster risk reduction, it requires working implementation of construction laws, planning of land-use, natural hazard, and human exposure checking and safety norms.

There are also basic rules of good governance which include regard for human rights, political receptiveness, cooperation, resistance, authoritative and administrative limit and proficiency (UNISDR, 2004); While the essential elements of good governance include law and order, straightforwardness, value, agreement orientated responsibility and vital vision (UNISDR, 2004).

Lassa, (2010) considers disaster risk governance as the manner in which society overall deals with the full cluster of its catastrophe chances as identified with a scope of various sorts of dangers. It advances the thought that there are many covering regions or focuses of expert for dynamic and obligation regarding disaster risk reduction the fields may arise as organizations. Disaster management incorporates a more extensive range of legislative issues, arrangements, and nation at various scales and levels from worldwide to nearby. It perceives the polycentric idea of disaster risk reduction. Disaster risk administration gives the system inside which debacle hazard the executives is to be carried out (Lassa, 2010)**.** It was also highlighted as the way by which the public authorities, government workers, media, private sector, and civil society organize at the central, state and local levels to oversee and decrease catastrophe and environment related dangers (UNDP, 2013). It can as well be aimed at protecting development investments and ultimately building people's resilience (UNDP, 2004). The governance response to disaster is activated when traumatic shock emerges and there is a political will to push for change (Colin, 2019). This will foster the establishment of interrelated principles, practices, and government's set-up at all levels and other non-governments actors to reduce the impacts of disasters (Tierney, 2012). Disaster risk

governance guarantees that adequate degrees of capacity are built; resources are made accessible to forestall, plan for, oversee and recuperate from calamities. Other things involved entail the systems, establishments, and cycles for residents to verbalize their inclinations, practice their lawful rights and commitments and intervene their disparities (UNDP, 2015).

2.4 Governance Response to Disaster in Nigeria

The development of governance response to disaster by the Nigerian government is been given a high consideration having acknowledged its importance (Building Nigeria's Response to Climate Change (BNRCC, 2011). Nigeria has contributed immensely to regional initiatives to tackle climate change among which African Ministerial Conference on the Environment (AMCEN) in 2009 adopted agenda for a regional corporation and national commitments to mainstream adaptation guide in regional and national development policy which is a declaration by Nairobi. Also, Nigeria with seven other countries created The Committee of African Heads of State on Climate Change (CAHOSCC) in 2009 and Nigeria has played a very crucial role in creating a common position to tackle disaster risk among African states (Ashley *et al.*, 2011). It hosted a study group in 2010 among African legislators who came up with concrete guidelines for lawmakers to address the effects of a disaster. It also adopted the Framework of Strategic Guidelines on the Reduction of Vulnerability and Adaptability to disaster in West Africa and the second year, Nigeria assumes the Chairmanship of ECOWAS (Ashley *et al.*, 2011).

Among the many other efforts of government was the creation of Special Climate Change Unit (SCCU) under the Ministry of Environment, inter-ministerial coordinating committee on Climate change and the National Climate Change Bill which was passed by the National

Assembly in 2010 to coordinate and support multi-level and cross-sector governance response to disaster risk (BNRCC, 2011). The Nigerian Meteorological Agency (NIMET), the National Emergency Management Authority (NEMA) and the National Planning Commission (NPC), etc. are all government agencies playing important roles in the Nigerian governance response to the disaster (BNRCC, 2011).

2.4.1 **First national communication** (FNC)

The participation of the Nigerian government and the role it plays in regional disaster risk reduction initiative development is immense, even though it is yet to develop its National Risk Reduction Strategy (Ashley *et al.*, 2011). In 2003 the FNC was developed and it identified the natural ecosystems, agricultural ecosystem, water resources, health and well-being, land-use change and forestry and energy as the national resources within the environment which are highly susceptible to disaster. Governance response, on the other hand, is seen as quick responses to actual or expected hazards in other to reduce their effects. Hence, conducting a vulnerability assessment in flood management study would help identify the types of problems the victims face.

In conducting its vulnerability assessment FNC adopted a quantitative approach due to limited available data that would be enough to establish a country-wide event development in climate. The assessment mainly used secondary data such as socioeconomic statistics, photographs, satellite images, geologic and oceanographic data, biological, fisheries, etc. After the assessment analysis of data was done with result interpretation which generated important statistical data and information. Socioeconomic values were categorized as low (L), medium (M), high (H) and critical (C). The assessment also considers factors of extreme

event where precision data can be obtained such as storm surges, river discharges, climatic conditions, tectonic uplift and a potential increase in temperature. Three levels of the study were introduced due to the importance of information gathering as well as examining the problem concerning Macro (the whole Country), Meso (ecological regions) and Micro (vulnerable areas in the country) (FNC, 2003).

It is important to note that Nigeria has established many approaches before and after the development of FNC and also bring together several civil society organizations to develop a National Adaptation Strategy and Plan of Action on Climate Change for Nigeria (NASPA-CCN). This was established to reduce the risk of climate change, make a reasonable improvement to local and national adaptive capacity and resilient, introduce new opportunities, and ensure smooth collaboration among stakeholders (BNRCC, 2011).

2.4.2 **Second national communication** (SNC)

This was published in February 2014 to ensure progress in the activities of cushioning the effects of a disaster which was started through the establishment of the FNC. It was put together in line with the United Nations Framework Convention on Climate Change (UNFCCC). The Vulnerability assessment relied upon was the framework for socioeconomic analyses and planning recommended by IPCC in the year 2007 (SNC, 2014). The framework employed the Econometric method where the assessment of household-level socioeconomic data was used to check the level of vulnerability of each social group to disaster. This lead to the designing of the measure of welfare loss which can be attributed to disaster and the weighing of indicators based on expert judgments and literature reviews. The choice of the indicator is informed by three parameters: (SNC, 2014)

What is peculiar to the nature of the local environment should be considered, this was requested in the UNFCCC guidelines of 2003 in the preparation of the National Communication on Climate Change (NCCC) of each reporting party.

Data availability: The indicators suggested are those that span over a good number of years i.e. up to 30 years and data set agreed to possess the desired integrity to deliver the anticipated assessment. UNFCCC later agreed that the review of literature that focuses on the subject of various indicators under different conditions must be thorough. All of the individual indicators would then be aggregated and to control whatever error that may arise with averaging the data, a general rating is considered using panel judgment. The impact of climate change is expected to affect various locations differently, therefore the assessment was bench-marked (SNC, 2014). The SNC make use of the matrix which contains five levels of vulnerability as they relate to feature which are peculiar to the coastal environment e.g. relief, rock type, landform, rise in sea level, shoreline displacement, tidal range, and annual maximum wave height in meters.

It is worthy to note that there are enough policies and plans put up by the Nigerian government to respond to disasters especially in vulnerable sectors of the economy such as agriculture, water resources, forests and ecosystems and coastal marine environment (Emmanuel, 2010). The system is well defined but lacks considerable implementation of plans and policies, which are needed to allow them to function efficiently (Pathak, 2017). The National Government created National Emergency Management Agency (NEMA) to oversee a well-defined framework that will be answerable for facilitating the setting up of enabling legislation and monitoring the activities of the State Emergency Management Agency (SEMA) as well as the Local Emergency Management Authority (LEMA).

The National Emergency Management Agency (NEMA) launched the National Disaster Management Framework (NDMF) to fulfill its mandate of disaster preparedness, mitigation, and recovery a round-table discussion was organized and participants were drawn from all levels of government; Federal, State and Local Government, Ministries, Departments and Agencies; Military, Police and Para-military; Civil Society Organizations; International Non-Governmental Organizations; partners in development and the private sector which give rise to innovations, perceptions and proposals that were developed into the NDMF. The framework is structured into the following eight sections;

2.4.3 Institutional capacity:

The agency employed the principle of shared responsibilities in the creation of vital institutional game plans for executing disaster management. It pronounces the National Emergency Management Agency (NEMA) as the planning body at the Federal level, State Emergency Management Agency (SEMA) at the state level, and Local Emergency Management Authority (LEMA) at the local government level. The three tiers of government, Ministries, Department, and Agencies (MDAs); military, police, para-military and Civil Society Organizations (CSOs) are charged to build the capacity of their crisis management organization to get ready for, forestall against, react to and recuperate from disaster occasions. Generally, this expected to reinforce the abilities of Federal, State and Local Governments to lessen the probability and seriousness of disasters.

2.4.4 Coordination

The Framework specifies how disaster management will be coordinated by stakeholders involved. The coordination is grouped into Strategic and Operational;

The strategic type of coordination is that which support the unity of efforts in implementation and it is further grouped into;

Vertical coordination: This suggests that NEMA, through the NEMA Zonal Offices coordinating the activities and operations of SEMA, LEMA and community structures. It shall also refer to SEMA coordinating the activities and operations of LEMA and community structures and reporting to NEMA. At the local government level, LEMA shall coordinate the activities and operations of community structures, and report to SEMA (NEMA, 2010).

Horizontal coordination: This category implies that NEMA, SEMA and LEMA will respectively mobilize and collaborate with relevant Ministries, Departments and Agencies (MDAs), Disasters Response Units (DRUs), Military, Police, Paramilitary, International and Local Non-governmental organizations, and development partner**s** (NEMA, 2010). The different matching up of the two systems above requires the defining of concurred aims, and the assignment of undertakings and duties as indicated by orders and capacities (See figure 2.2)

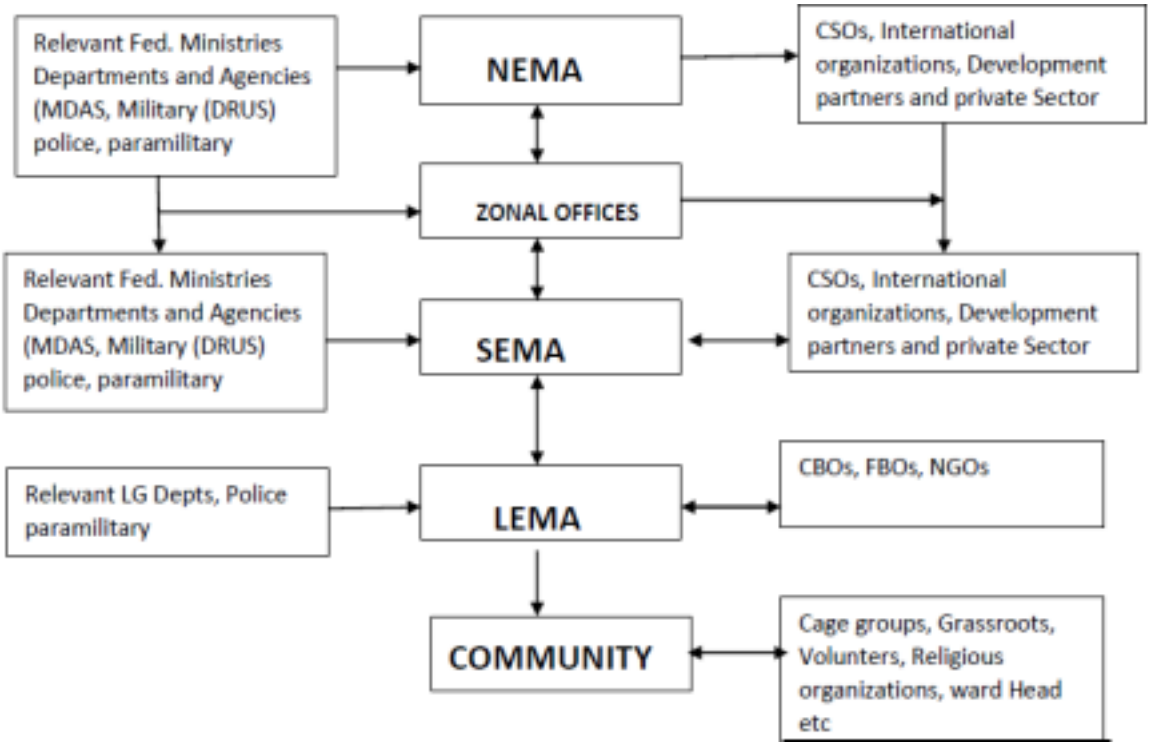

Figure 2.2: Horizontal and Vertical Coordination in Disaster Management
Source: NEMA, 2010

Operational coordination involves the method for making an interpretation of disaster management intends to handle level tasks and exercises. Relevant approaches such as; risk assessment, risk reduction, preparedness, prevention and mitigation, response and recovery would be adopted based on the sections of the disaster management framework by the coordinating bodies.

Disaster risk assessment This is the first step in planning an effective disaster risk management. It involves checking hazards, weaknesses and estimating adapting/variation abilities to set needs for risk reduction and viability of stakeholders' endeavors. The activities shall revolve around predicting and planning for known dangers or debacles to forestall misfortunes and breaking point endangering impacts; and reduce vulnerability through good development initiatives (NEMA, 2010).

Disaster risk reduction: This will minimize the potential effects of disaster on people, their livelihoods and the climate. It likewise presents arranging and execution as DRR systems to illuminate improvement situated ways to deal with plans, program and tasks that diminish the risk of disasters. Activities here revolve around the integration of strategic planning; collaborate with stakeholders on best approach; develop all initiatives into structures and process; implementation and monitoring, and ensure transparency and accountability (NEMA, 2010).

Disaster preparedness, prevention and mitigation: This has to do with techniques to keep the event of such calamities from devastatingly affecting individuals, infrastructures and the economy; shorten the event of catastrophic occasions; and decrease the effect of disaster, on the off chance that they do happen (NEMA, 2010).

Disaster response: This is the immediate actions to be taken after the event of a disaster. It will focus on the necessities for an incorporated, composed arrangement that address fast and viable reaction to disasters (NEMA, 2010).

Disaster recovery: This include programme, activities and interventions embarked upon to help disaster survivors and affected communities to return to normal life and minimize the risk of future disaster**.** It dwells more on strategies required for bringing back disaster-affected area and victims to normalcy through reconstruction, rehabilitation and reintegration (NEMA, 2010).

Facilitators and enablers: This has to do with the provision of sufficient conditions for, coordinating jobs of crisis the board offices; data the executives and correspondence; observing and assessment; schooling and preparing; and public mindfulness and findings.

Matters such as funding arrangement for disaster management are also covered in this section (NEMA, 2010).

However, the existing situation shows that the nation does not presently have a governance response procedure or cross-cutting establishment saddled with the responsibility of guiding national response in disaster management though both are in development (Ashley *et al.,* 2011). The policies in place requires a framework that link them to human development which is the main focus for disaster risk governance, the nation's institutional capacity is weak and there are agencies/units of government at the Federal Ministry of Environment that are established to respond to disaster but there is no physical existence of such institutional establishment at the State and local government levels to prepare for, mitigate and respond to disaster (Emmanuel, 2010). Ola, (2018) notes that the climate change department in the Nigerian Federal Ministry of Environment is charged with coordinating national response to disaster under the United Nations Framework Convention on Climate Change and concluded that there is no representation of this department at the local government areas where the impact of the UNFCCC should be felt by the communities. It has also been indicated by Cookey *et al.* (2019) that communities have taken it upon themselves when the government has failed in its responsibility to protect its citizen against disaster, they construct drainage and build of soak pits which are formed from the runoff from the drainage channels. Unfortunately, the drainage does not last long because most of them are not carried out using the proper civil engineering method.

In July 2019, a pioneer Ministry of Humanitarian Affairs, Disaster Management and Social Development was established. The mandate has been given to this ministry to address severe humanitarian crises and complex threats by extreme climatic events in the county (Edino,

2019). National Emergency Management Agency (NEMA) now being supervised by the new ministry launched its National Emergency Management Policy document to follow suit on the United Nations Sendai Framework 2015-2030 for disaster risk reduction which was adopted by member states of the UN four years ago (Edino, 2019). This is expected to provide the required Governance Response with the vulnerable communities, groups, and persons required to be protected against disaster risk. In other not to be the victim of an ineffective framework especially at the local level, there is a need to conduct an assessment of local fit of the framework which is the gap this study is trying to fill.

2.5 Governance Response: A Paradigm Shift to Disaster Risk Reduction

Since the beginning of the millennium record has shown that the fatality and economic and financial misfortune due to disaster are frightening, the incidences of disaster occurrence continue to increase and the trend is likely to continue that way (UNISDR, 2004). International Strategy for Disaster Reduction (ISDR, 2005) promote arguments on mainstreaming disaster risk reduction in the following;

i. Making disaster risk a core in achieving Sustainable development by focusing more on risk assessments and make a proper plan in reducing human and community vulnerability;
ii. Development is seen as economic growth; it can also be seen as societal improvement where people attained what they yearn for especially from the government. However, development can also trigger serious disaster if not properly administered i.e. dam construction which was supposed to generate power or irrigation to the people was also responsible for flooding where lives and properties were lost;

iii. The political will to make a positive change in view of the good understanding of the disaster risk by the actors such as the government, private policymakers, and community leaders;

iv. The need for international communities to advocate for policies and actions to minimize the risk of disasters in developing nations even though it is well acknowledged that the government of those countries is responsible for their safety;

v. The planning for disaster risk reduction activities couple with preparing for the emergency funding of high profile disaster.

Emphasizing the above argument, thus, there is a need for the development of a disaster risk reduction theory that is capable of guiding actors in disaster risk reduction endeavors (Reddy, 2017). This led to the adoption of the Hyogo Framework for Action (HFA) at the World Conference on Disaster Reduction that took place in Kobe, Hyogo city of Japan in 2005. The HFA was endorsed by 168 countries from 2005-2015 with the theme: Building the Resilience of Nations and Communities to disasters (UNISDR, 2013). The document further describes the policy framework as a tool that has broadly considered risk reduction, integrates it into the activities of government and non-government and made to be multi-disciplinary in responding to the identification and bringing to reality of disaster risk reduction (DRR) principles. The HFA identifies the following five set of priorities to guide countries' activities given the general objectives:

i. Ensuring that Disaster Risk Reduction is a central and local importance, with a solid institutional foundation

ii. Recognizing, assessing and checking chances of disaster and improving early warning mechanism;

iii. Utilizing information and training to assemble a culture of safety and resilience at all levels;
iv. Lessening fundamental risk factors of disaster, regardless of whether social, economic, environmental or land use; and
v. Fortifying preparedness for disaster to raise the effectiveness of response at all levels.

In the year 2013, UNISDR was tasked by the World Conference on Disaster Reduction (WCDR) to establish an evaluation system to check the success of HFA in Countries and Regions, noting issues to its full implementation since 2005 (UNISDR, 2013). The idea was to communicate new ways in disaster risk reduction and in addition to formulating a post-2015 disaster reduction framework (UNISDR, 2013). Reports by Nations and Regional organizations were now guided specifically in the following three goals as outlined in the HFA;

i. The efficient combination of disaster risk consideration within the principles and programs of sustainable development at all levels of government, giving special attention to disaster mitigation, prevention, preparedness and reducing vulnerability;
ii. The creation of institution and strengthening the existing ones through capacity building and system, particularly at the local level, to systematically assist in the improvement of community resilience to hazards;
iii. Program designing and implementation such as emergency preparedness, response, and recovery, should include the approaches of risk reduction, as well as building back better of affected communities.

Another Framework was agreed upon at the United Nations World Conference held in Sendai, Japan in 2015 called Sendai Framework for Disaster Risk Reduction 2015-2030 (UNISDR, 2015). Although, HFA was found to have been incorporated globally, however, African countries have only been able to make progress on institutional and administrative plans for disaster risk but are yet to harmonize it with existing disaster risk frameworks in other ministries (e.g. agriculture, water resources, power and energy etc.) (Madu *et al.*, 2019). The existing institutional structures are also not getting the required resources to champion a broad-based engagement in DRR (Madu *et al.*, 2019). The Sendai Framework succeeded the (HFA) 2005-2015 and was built on the essential parts of HFA to ensure continuity in its achievements by Countries and other actors as well as the development of new ideas as advised by experts (UNISDR, 2015a). Disaster risk management was strongly emphasized as against disaster management, issues of disaster risk reduction as an expected outcome; working to accomplish the aim of stopping new risk occurrence; reducing the risk existing, fortifying resilience using guiding principles; making prevention and disaster risk reduction the primary responsibility of state and government agencies (UNISDR, 2015b). The scope has promoted health resilience throughout the document and also covered man-made and natural hazards which comprises environmental, technological and biological hazards and their risks (UNISDR, 2015b). There are four important priorities outlined and seven global focuses of reacting to disasters for the fifteen years after it has been endorsed

The four priorities are:

i. Having good knowledge of disaster risk from every angle and apply the awareness of all its fact to conduct a risk assessment, prevention, mitigation, preparedness, and response;

ii. Having a formidable disaster risk governance to control disaster risk and encourage cooperation at global, central, state, and local levels;

iii. Make good investment in DRR to improve the resilience of communities and people in the area of their economic, social, health, culture, properties and their environment.

iv. Improving disaster preparedness for efficient response and to "Build Back Better" in recovery, rehabilitation, and reconstruction (UNISDR, 2015b).

Balikuddembe and Nakiranda, (2017) reported that Sendai Framework has an established standard for partnership, such as data sharing, early warning systems, practices and knowledge, and capacity building, which can be systematically investigated together to best react to unwanted destruction of lives and properties. They, however, conclude that future local proof based examination is needed to exhaustively explore, recognize and advance the savviest alleviation measures, which could be utilized to react to disaster risk reduction most appropriately. Fakhruddin (2017) in an exclusive interview responding to the significance of Sendai Framework and other frameworks such as Sustainable Development Goals (SDG) and COP21's Paris Framework reiterated that they will strengthen risk brittleness and resilience framework for multi-hazard assessments to ensure an ideal disaster risk governance is attained at the international, national, regional and local levels.

2.6 Threat to Governance Response in Disaster Risk Reduction

Making public policy under unusual stressful situations such as disaster is indeed a big deal but the real deal are the activities of public officials and the non-government actors involved in the response process who may lack response capacity in a disaster situation (Schneider, 1992). The lack of understanding of key Governance functions such as people's participation (Inclusiveness) and accountability before disaster explains the poor performance during and

after disaster (UNDP, 2015). No recovery processes will be successful without providing absolute opportunities for inclusive participation and public scrutiny, they will eventually generate instability (UNDP, 2015). There are identified four dimensions of governance that should upgrade the nature of strategy making in the endeavour of governance response to disaster risk they comprise predictability, participation, transparency, and accountability (Ahrens and Rudolph, 2006).

Predictability: Political and economic actors must be able to accurately estimate, comprehend the standards and have the option to acknowledge if they have been obeyed or not.

Participation: In the making of policies and creation of programs, they must be adequately flexible in other to accommodate an institutional change in case there are options, technological or environmental requirements, or particular societal activities or needs change as time passes. This will likewise give room for the assumption of some realities with or without proof and as well explore available avenue by which individual or groups can start and add to institutional changes

Transparency: The rules should not contain any ambiguity rather should be glaringly defined and economic specialists must be very sure that they are properly enforced

Accountability: The institution must be protected to make it difficult for big political and economic actors to randomly outsmart or change existing standards while other actors or the entire society bear the brunt.

2.7 Rights of Vulnerable Individuals and Communities to Disaster Risk Governance

The Human Rights Council (HRC) identified that disaster risk reduction begins with the protection and advancement of human rights (UNDRR, 2019). Although there are little shreds of evidence of programs that linked human rights and disaster risk reduction, however, a key theme in the Sendai agreement is accountability, buttressing the relevance of disaster risk reduction ought to be mainstreamed into public policy, further refining how human rights can be protected alongside the prevention of disaster. (UNDRR, 2019). The declaration of inclusiveness in the agreement at the implementation stage also presents the promotion of human rights and allows for the breaking of the poorly networked development and work on an organized inter-sectional development (Varma, 2017).

Although, disaster risk reduction has extended its broader hands of help in areas of public anxiety: climate change and variability, rapid and unplanned urbanization, poor land management, change in demography, non-risk-informed and weak institutional policies, unsustainable uses of natural resources, and so on (Sommario and Venier, 2018). It is of high importance to note that the activities of disaster risk reduction as regards these areas are appropriately coming to be by human rights considerations and that the power of international human right law (IHRL) in promoting Disaster Risk Reduction is more fully taken into account (Sommario and Venier, 2018).

CHAPTER THREE

3.0 RESEARCH DESIGN AND METHODOLOGY

3.1 Research Design

Many scholars, for instance, Reddy, (2017); Sandoval and Voss, (2016); Eze *et al.,* (2018); and Kamara *et al.,* (2019) have investigated governance response to disasters. Most of these researches have focused mainly on disaster risk assessment model; disaster governance and post disaster vulnerability; and social vulnerability. Howsoever, there is very little or no work done on governance response to flood disaster in Niger state, which has more to do with the establishment of government institution at the state and local government level to reduce the risk of flood disaster. The federal government established NEMA while a replica of that is also present at state level; but the same cannot be said at Mokwa local government where Kede floodplain is located. This justify the need to conduct an assessment of governance response system and copping mechanism adopted by the people of Kede communities in the event of flood disaster in the floodplain.

The research employed quantitative survey research design. Through this method, data were collected to give a snap-shot of the characteristics of floods and disaster risk governance in the study area. This method also avails the researcher, the opportunity to compare the flood and governance experiences of the population groups in different communities within the floodplain. Data from the study area, were collected from the victims of floods and the officials of governance structures; in an attempt to assess the effectiveness of the National Disaster Management Framework (NDMF) in Kede floodplain to determine its local fit. As a result, the study also employed the descriptive quantitative approach which allowed data to be systematically collected through descriptive survey questions (Reddy, 2017)

3.2 Data Types and Method of Data Collection

This study used both primary and secondary data collection. To serve as a guide to this study, scholars have used methodology that combined field data collection and knowledge-based perception from scholars through a rigorous search of the internet, Academia, Google Scholar and other academic databases, as well as records of past flooding events from the local government.

3.2.1 Primary data

The primary data collected for this research include, frequency of floods, number of causality, size of farmland lost to floods, number of collapsed buildings due to flooding, number of infrastructural damages as well as other socio-economic losses. Another set of primary data obtained from the residents of the study area include, the amount or quantity of relief material from NEMA, NSEMA and other private or international aids; coping mechanism and frequency of their involvement in governance and decision making, as it affect their lives and livelihood. These primary data enable the researcher to have a first-hand knowledge of the disaster risk governance and survival strategies among the citizens of Kede floodplain communities. The data collection instruments for Primary Data Method are as follows:

3.2.1.1 *Reconnaissance survey*

This is a survey carried out before the proper work is done; it is the thorough study of the entire area using maps and high-resolution aerial photographs. This will make the work approach easier when data are to be collected, the area would be divided on the map for easy identification and data collection.

3.2.1.2 *Structured questionnaire*

This is an instrument of data collection in which the questions therein are asked and have been precisely decided in advance. It included "open-ended" and "close-ended" questions. The structured questionnaires were used to collect data to assess the response of government from the household in the study area.

3.2.1.3 *Semi-structured questionnaire*

This questionnaire was prepared to share their experiences the way they happened as against the researcher's choice of options. This type questionnaire method was used to collect data from stakeholders in the area such as the Community leaders, Local Government officials, District head, NGOs, Cooperative organization etc.

3.2.2 Secondary data

Secondary data were sourced from academic journals, records of past flooding events from the agencies involved in disaster risk management, (given particular considerations to flood frequency, duration and extent of damages in the study area) and Governance responses. Also, texts from past researches, media prints and photographs, and general literature review of meteorological and hydrological forecasts were used to prove the findings from primary sources.

3.3 Sampling Technique

The sampling technique adopted for the administration of structured questionnaire of the primary data collection is stratified random sampling which involves the division of the study area into smaller areas otherwise known as strata. Thirty villages in the study area were grouped into five strata, with each strata consisting of six communities. The groupings were

done based on members' similar attributes. Similarly, the semi-structured questionnaire was used to elicit information from the local government officials, NEMA and NSEMA officials, community leaders and NGOs.

3.4 Sample Frame

The sample frame encompasses all individuals residing in communities of Kede floodplain; which makes up the population of interest. However, the available census record of 2006 is not detailed to community level population figures. In the same vein, the local and state governments demographic offices are unable to make available the population figure for the district because of the fact that, the last census conducted in Nigeria were not broken down into districts, wards, and street. Hence, the researcher had to use the counting of buildings in the study area and multiplying by the national average household size of 5 to arrive at the sample frame for the study. Buildings in the research communities were counted making use of high-resolution imagery; and it was revealed that there are 6850 houses in the study area. Having multiplied the number of residential structures by the average household size of 5; the researcher obtained an estimated population of 34,250 for Kede floodplain communities.

3.5 Sample Size for The Study

The sample size for this study is derived from the population through a demographic formula adopted for determination of sample sizes in the research carried out by Barlett *et al*., (2001). He argued the overall target of survey research is to gather information illustrative of a population. The researcher utilized data accumulated from the study to sum up discoveries from a drawn example of a population, working within the confidence level of 95% (i.e random error limit of 5% or 0.05). The formula used for the generation of sample size is the

one proposed by Krejcie and Morgan, (1970). It is suitable for determination of appropriate sample sizes for most researches with less than 100,000 population of interest. The Krejcie and Morgan used to determine sample size is shown below.

$$n = \frac{X^2 * N * P(1-P)}{\left(ME^2 * (N-1)\right) + (X^2 * P(1-P))}$$

…….. equation (1)

Where:
n = Sample Size

X^2 = 95% confidence level

N= Population Size (34,250)

P= population proportion (.50)

ME= desired Margin of Error (0.05)

After substituting the parameters above into the formula, the sample size for this study was obtained as **380 residents** of the floodplain communities in Kede district of Mokwa LGA.

3.6 Method of Data Analysis and Presentation

Quantitative data collected in the field were analyzed following the steps below;

3.6.1 Data coding: -

Data were properly organized from their raw form to a format that aids its transformation to a meaningful result using computer programs such as SPSS and Microsoft Excel in analyzing them.

3.6.2 Data Analysis

The analysis of data employed Statistical Method by which Inferences were drawn from the tabular arranged format of frequency and percentage. The use of bar chart was used in the analysis.

CHAPTER FOUR

4.0 RESULTS AND DISCUSSIONS

This chapter focuses on the discussion of the outcomes of the research survey. The discussions are done along the set objectives of the research; hence, the chapter is divided into segments. The first segment considered the assessment of historical trends of flood in the study area; section two examines the governance response strategies adopted by residents of Kede floodplain; while the third section evaluates the impacts of governance structures in reducing the flood disaster risks. The analysis includes responses from community members, community committee and government emergency management officials on Kede flood disaster.

4.1 Historical Trends of Flood Occurrences in Kede Floodplain

Flood disaster is definitely not a new concept in Nigeria. Its dangerous inclinations everywhere are tremendous. It's happening world over have been accounted for in numerous part of the country long before the arrival of colonial masters. For example, the 1948 flood occurrence in Ibadan is one of the earliest and oldest experiences recorded in the history of Nigeria (Etuonovbe, 2011). In Mokwa and its environs, the first case of major flood is dated back to 1951 when a flash flood ravaged some parts of the local government area (Agbonkhese *et al.,* 2014). According to the inhabitants of Kede district, other major floods in the study area includes that of 1991, 2003, 2007, 2008, 2011, 2012 etc. The LGA have in a lot of times witnessed flood occurrences that have asserted numerous lives and properties worth millions of dollars.

In Kede floodplain, which is one of the districts in Mokwa LGA, the surveys conducted revealed that the occurrence of flood used to be on the average of once in four years. However, since the dawn of 21st century, flood incidents in Kede floodplain communities have become an annual phenomenon. This might be linked to the increasing intensity of global warning and other effects of climate change. The study depicted that during the peak of rainy seasons, communications, transportation and businesses are always interrupted due to the occurrence of floods. The annual disasters always destroy buildings, roads and other infrastructure; while many farmlands are usually inundated and commercial establishments are paralyzed. This is in addition to the indescribable difficulty normally witnessed, by almost every vulnerable groups (particularly the women and school children) whenever the flood disasters hit the study communities. For the sake of comparison, Table 4.1, Figures 4.1 and 4.2 below shows the historical trends of floods in Kede floodplain communities with its devastating effects on lives and properties.

Table 4.1: Trends of flood occurrences in Kede floodplain and its casualties

Year	Number of Communities (villages) Affected in Kede District	Casualty (Number of Live lost)	Estimated Economic Lost (in naira)
2010	19	2	9.2 million
2011	13	0	7.0 million
2012	32	7	23.5 million
2013	22	3	18.0 million
2014	17	1	15.8 million
2015	28	2	16.4 million
2016	25	0	12.1 million
2017	26	3	21.3 million
2018	24	1	19.6 million
2019	30	3	20.6 million
2020	20	1	14.4 million
		23	**177.9 million**

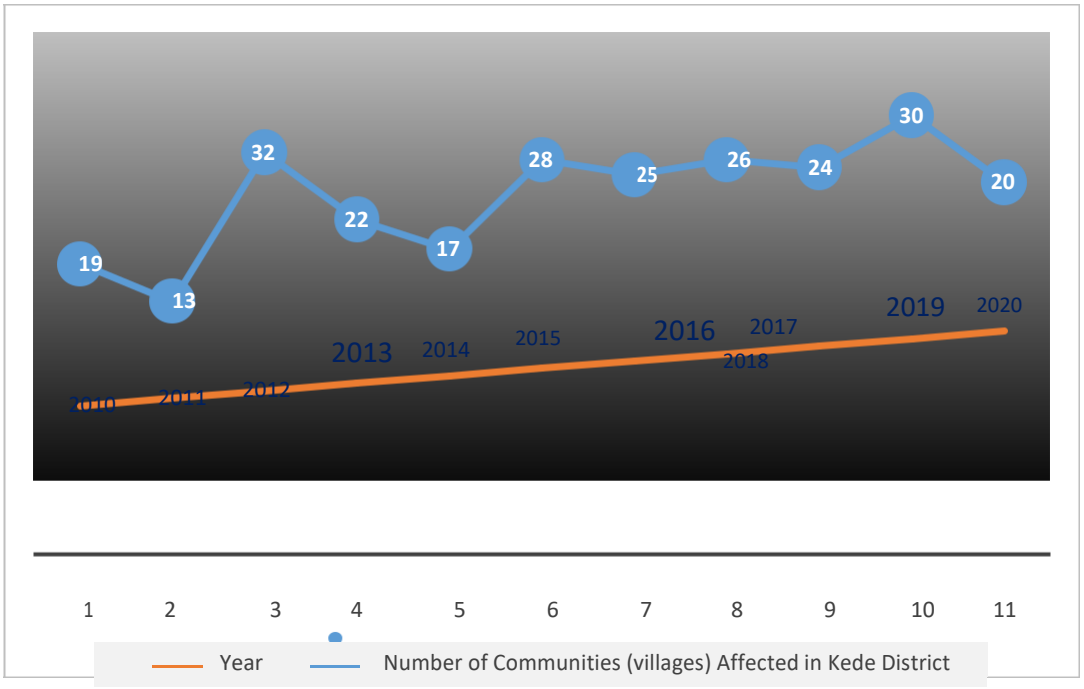

Figure 4.1: Communities Affected by Flood Incidents in Kede Floodplain between 2010 and 2020

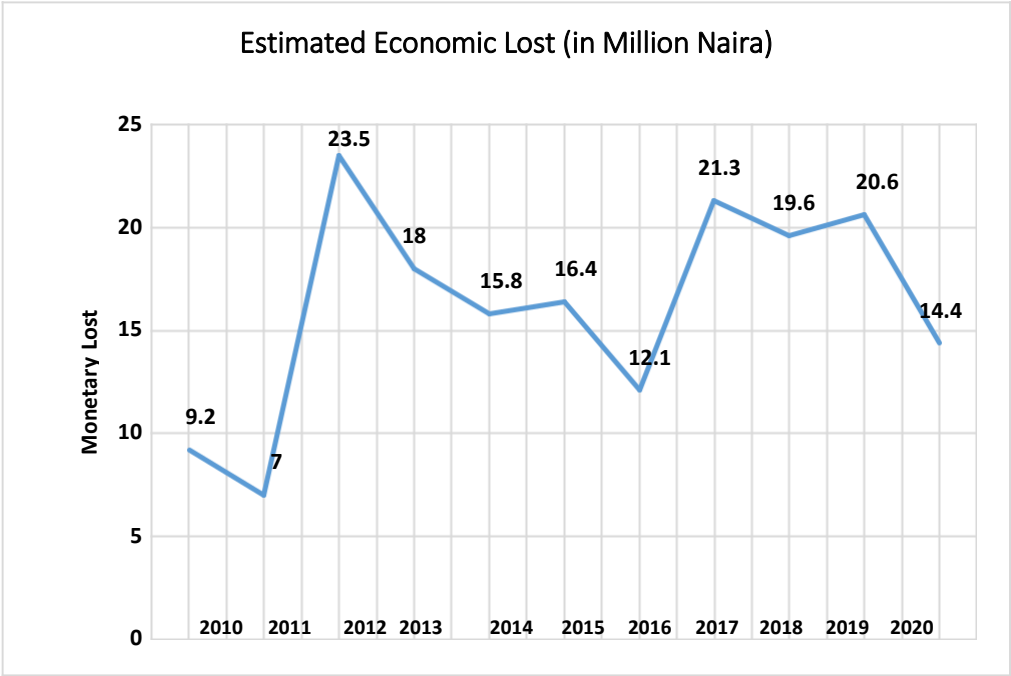

Figure 4.2: Estimated economic loss due flood events in Kede Floodplain between 2010 and 2020.

The above outcome revealed that the most devastated flood disaster in the study area happened in year 2012, with estimated loss of over 23million naira and about seven people were also killed by the flood. Even on the national scale, the 2012 flood was the worst in the history of flooding in Nigeria, resulting to many losses of lives and properties. Over the period of eleven years, it was discovered that the study area had lost 23 lives to annual flooding and about 178million naira have also been lost due to destruction of properties by the reoccurring floods. The above revelation suggests that Kede floodplain had suffered huge losses to devastating effects of flooding; with varying degrees of impact among the villages that make up the district. See Plate I and II of Ketso village before and during flood

Plate I: Kesto Village located close to River Niger

Plate II: Ketso Village Submerged in Floodwater

4.2 Flood Governance Response Strategies in Kede floodplain community

In order to effective examine, the flood governance strategies adopted be the residents of Kede communities, there is need to understand their socio-cultural and economics background and educational statues. Therefore, this sub-section examines the socio-cultural compositions of the population of study.

4.3 Gender of Respondents

Table 4.2 shows that majority (86.8%) of the respondents were male while the remainder were female. This does not mean the male are more than female in the study area rather, the household heads were the target in the study area. This also explains the vulnerability of female because many times their voices are not heard and are not properly represented in the scheme of issues that affect their lives. Meanwhile the analysis from between the villages

reveals that Rabba, Muregi and Edogi had the highest number of Men (5.2%) who responded while Sunti and Kpashafu recorded the least female respondent (0.00%) See Appendix A

Table 4.2: Gender of Respondents

		Male	Female	Total
Total	Expected Count	330.0	50.0	380.0
	% within Village Name	86.8%	13.2%	100.0%
	% within Gender of respondents	100.0%	100.0%	100.0%
	% of Total	86.8%	13.2%	100.0%

4.4 Household Head

Table 4.3 shows that majority (91.3%) of the respondents were household head while the remainder (8.7%) were not household head. This to a large extent shows that the assessment is based on those who know the impacts and the level of Governance responses to flood disasters. The household head participated in all community safety measures in place especially in the area of evacuation when the area gets inundated.

Table 4.3: Household Status

		Household Status		Total
		Yes	No	
Total	Expected Count	347.0	33.0	380.0
	% within Village Name	91.3%	8.7%	100.0%
	% within Household Status	100.0%	100.0%	100.0%
	% of Total	91.3%	8.7%	100.0%

4.5 Household Professions

Table 4.4 shows that majority (62.9%) of the respondents were farmers, (29.7%), while the remainder (7.4%) were traders. This analysis shows that flood disaster has a serious impact on socio-economic activities especially in farming and fishing activities which are the two major occupations of the villagers.

Table 4.4: Occupations of Respondents

		Profession			Total
		farmer	Trader	Fishing	
Total	Expected Count	239.0	28.0	113.0	380.0
	% within Village Name	62.9%	7.4%	29.7%	100.0%
	% within Profession	100.0%	100.0%	100.0%	100.0%
	% of Total	62.9%	7.4%	29.7%	100.0%

4.6 Marital Status

Table 4.5 shows that majority (91.6%) of the respondents are married while (8.4%) of the respondent are divorced for some reasons. This has placed both male and female as household heads who are at the mercies of proper governance responses for their survival. See APPENDIX D

Table 4.5: Marital of Respondents

		Married	Divorced	Total
Total	Expected Count	348.0	32.0	380.0
	% within Village Name	91.6%	8.4%	100.0%
	% within Marital Status	100.0%	100.0%	100.0%
	% of Total	91.6%	8.4%	100.0%

4.7 Literacy level

Table 4.6 shows that majority (79.7%) of the respondents attended either primary school, secondary school, or tertiary institutions. Only about (20.3%) of the respondents are

illiterates. This analysis shows that the respondents have higher likelihood to understanding what is expected as what governance response is to flood disaster. The also engage others in the dissemination of information about rising water level and potential damage it can cause when the flood strike.

Table 4.6: Literacy level of Respondents

		Primary	Secondary	Tertiary	Illiterate	Total
Total	Expected Count	234.0	36.0	33.0	77.0	380.0
	% within Village Name	61.5%	9.5%	8.7%	20.3%	100.0%
	% within Literacy Level	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	61.5%	9.5%	8.7%	20.3%	100.0%

4.8 Local Flood Governance Response Strategies adopted by households in Kede

Different local flood risk management strategies have been used by the resident in study area. These measures look into diminish the danger from flood occasions to individuals and their livelihoods. The study revealed the use of the following flood risk management strategies in Kede Floodplain communities:

4.8.1 The development of local levees and floodwalls

Development of levees is one of the methods of minimizing the effects of flooding on farmlands and houses in the study area. Levees get the floodwaters far from the space behind the levee until where the levee is overtopped or falls flat and the region behind the levees is immersed and individuals and property are impacted. Therefore, the exposure of people and properties behind levees are determined by the characteristics of the levee (height, strength) and their locations. About 60% of the households in Kede floodplain adopted the use of local

levees to protect their homes and farmlands; however, most of these levees easily fail as they are manually constructed and of low heights. See Plate III

Plate III: Collapsed building at Sunti village

4.8.2 Monitoring potential disaster: - Figure 4.3 reveals that the entire respondents (100%) are aware of flood disaster and are presently monitoring potential disaster using the local knowledge of flood monitoring. Therefore, if proper governance response and National Disaster Management Framework (NDMF) of NEMA were properly implemented in these local communities, much tension wouldn't have been created.

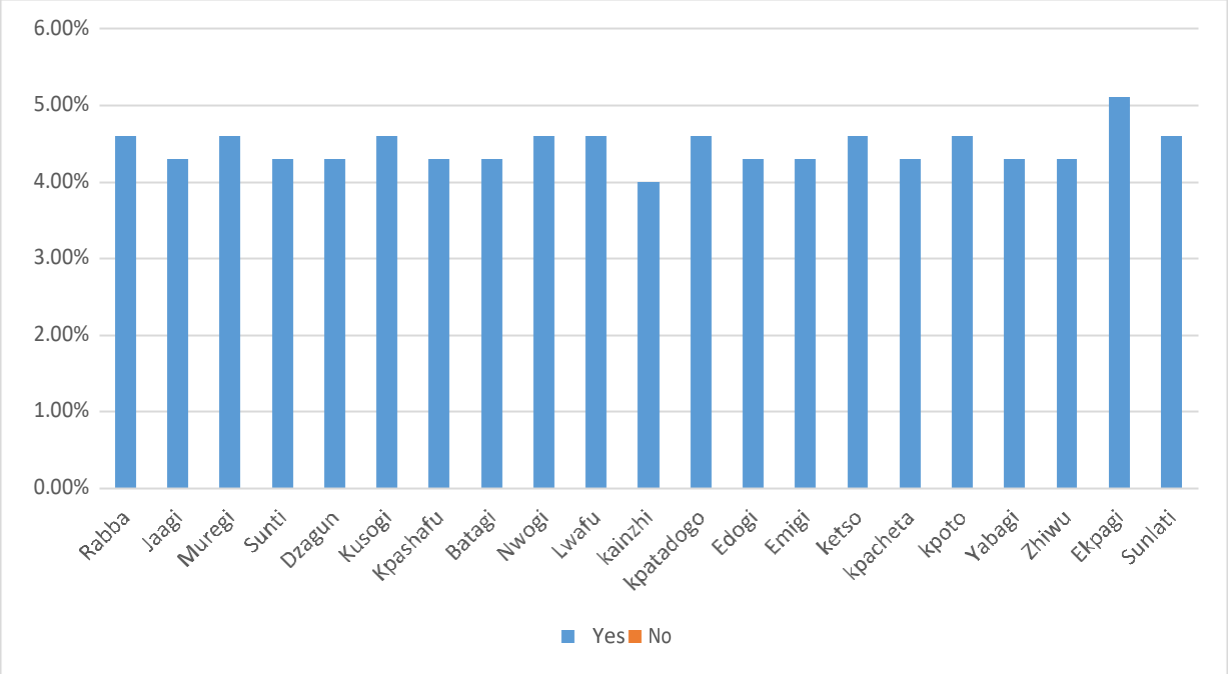

Figure 4.3 Monitoring potential disaster

4.8.3 Evacuation plan: - When the residents of the floodplains were asked if they have any evacuation plan; only few of the household heads responded in affirmative. Table 4.7 shows that majority of the villages (60.3%) had no evacuation plan while (39.7%) had. The ratio of villages without evacuation plan is 3 times of those that have, which poses the villages to greater risk in the event of another disastrous flood. Meanwhile the analysis from between the villages suggest Sunti, Kusogi, Lwafu, and Dzagun villages require immediate consideration See APPENDIX F.

Table 4.7: Use of Evacuation Plan

		Yes	No	Total
Total	Expected Count	150.0	229.0	380.0
	% within Village Name	39.7%	60.3%	100.0%
	% within Is there any evacuation plan	100.0%	100.0%	100.0%
	% of Total	39.7%	60.3%	100.0%

4.9 Assessment of the Impacts of Floods Hazards

Floods impact on the study communities in a number of ways, ranging from loss of lives, injuries and mental health effects, to the destruction of properties and infrastructure. Despite the growing numbers of people affected by flooding, there is little or no effort from the local government level to ameliorate the suffering of these people. Table 4.8 shows the level of impacts of most damaging flood hazards occurring in the community. The impacts are mostly on infrastructural damages such as borehole collapse (22.9%), road destruction (35.0%), and water contaminations (42.0%). The analysis from within the villages shows that both road destruction and water contamination are the most common in the study area.

Table 4.8 Impacts of floods hazards

		Borehole damage	**Contaminated Water**	**Road destruction**	**Total**
Total	Count	87	133	160	380
	% within Village Name	22.9%	35.0%	42.0%	100.0%
	% within What are the impact of most damaging flood hazards occurring on infrastructure in the community	100.0%	100.0%	100.0%	100.0%
	% of Total	22.9%	35.9%	42.0%	100.0%

Also, the respondents added that they have done what they could over the year, but are still seriously impacted. This is evident in their crop farms which always get submerged under flood water and the inability of fishermen to engage themselves in their activities during flooding.

4.9.1 Major infrastructures that are mostly destroyed by the floods

Table 4.9 shows that roads (76.3%) and economic trees (8.3%) are likely to be most while affected infrastructures while potable water is the least most affected infrastructure with (1.7%) The analysis from between the villages shows that Sunlati (15.0%) may likely be the worst hit in terms of damages to road when disaster strike while kpashafu (26.7%) may be the worst hit in terms of pollution to water when the disaster strike. They are deadly pointer and threat to human existence that requires quick governance responses. See APPENDIX E and Plate IV.

Table 4.9 Mostly Affected Infrastructure in the Study Area

Road	Economic trees	Potable Water	Total
296.0	60.0	24.0	380
77.9%	15.8%	6.3%	100.0%
100.0%	100.0%	100.0%	100.0%
77.9%	16.3%	6.3%	100.0%

Plate IV: Kusogi road washed away by flood

4.10 Assessment of Extant Response of Government in Disaster Risk Reduction in Kede

In other to reduce the risk of flooding in the study area and other parts of the country, there have been numerous interventions by the federal and state governments; however, very little has been done in the Mokwa local government where the floodplain is domicile. This might be the consequence of weak governance system at the local level and poor political willingness by the administrators of the LGA.

Over the years, the disaster risk governance structures provided by the federal and state governments have being taking steps to combat the challenges of floods in the study area. Specifically, the federal government through NEMA established the National Disaster Management Framework (NDMF) to be implemented in all the potential risk area of the country; use of media to send out early warning signals to communities that are vulnerable to food disaster; and the provision of help materials in case of floods.

Similarly, the Niger state government through the state emergency management agency (NSEMA); also adopted measures to prevent or mitigate the impacts of flooding. These measures include provision of jingles on radio and TV stations to warn people, collaboration with federal government to provide temporary camps to accommodate internally displaced persons; and other humanitarian services.

In spite all the aforementioned efforts, the success level of disaster risk governance in Kede floodplain is still low; due to the fact that most of the efforts are reactionary rather than proactive. And also the fact that local government and community based organization which should be the most active actors in managing community floods has been incapacitated as result of weak local administration in Nigeria.

4.10.1 Community disaster management plans

The survey on the efforts of community based organization shows that, the villages like Rabba, Sunti, Kpashafu, Lwafu, Edogi, Tula, Kpacheta, Zhiwu, Sunlati villages all have disaster management plans in place while villages like Ja'agi, Dzagun, Batagi, Kainzhi, Muregi, Kusogi, Nwogi, Kpatadogo, Emigi, Ketso, Poto, Yabagi, Kpangi don't have disaster management plans in place. These villages identified for not having disaster management plans are at the mercy of nature and government to help manage disaster when it eventually occurs. See Appendix G

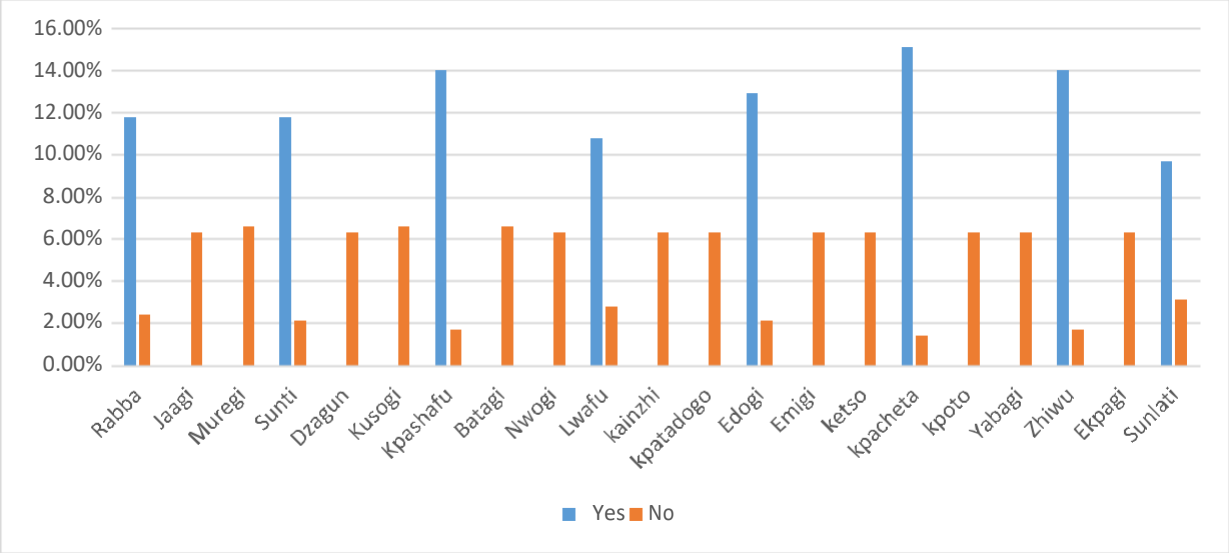

Figure 4.4 Awareness of National Disaster Management Policy

4.10.2 Training and awareness program for the LG and Community on DRR

Table 4.10 below shows that (76%) of the respondents have never participated in any form of disaster risk reduction training or programme organized by government. While (17%) added that they do not know what capacity building on LG or the community DRR entails and (7%) of the respondents are attest to the fact that they have the required capacity on DRR. This therefore, means that the local government, community and its leadership lack the capacity which is a reflection of weak local governance and also a pointer that the Kede floodplain is so vulnerable and at risk of the disaster. Since DRR effort is a collective one from government and non-government actors, government should focus more on implementation training activities for all and sundry.

Table 4.10 Local government and community capacity building

Respondents	Frequency			Total
	Yes	No	Don't know	
Count	27	289	64	380
% Within Village Name	7%	76%	17%	100%
% within What are the impact of most damaging flood hazards occurring on infrastructure in the community	100%	100%	100%	100%
Total	27%	76%	17%	100%

4.10.3 Understanding risks and vulnerability in the study area

The result from following table 4.11 shows that the government has never carry out any risk and vulnerability assessment in the Kede floodplain area. According to the result (80%) of the respondents confirmed there is no assessment done while, (20%) of the respondents do not know if it was done or not. The identification of high risk hazards through community risk assessment will avail the local government authorities with practical experience in assessing their risk environment, determining the vulnerabilities of their local communities, and taking the appropriate actions to mitigate them by identification of priority projects for the community.

Table 4.11 To your knowledge, have there been any assessment of risks and vulnerability in Kede floodplain

Respondents	Frequency			Total
	Yes	No	Don't know	
Count	0	304	74	380
% Within Village Name	0%	80%	20%	100%
% within What are the impact of most damaging flood hazards occurring on infrastructure in the community	100%	100%	100%	100%
Total	0%	304%	74%	100%

4.10.4 Disbursement of relief material by government after disasters.

Figure 4.12 reveals that most of the respondents (72.4%) do not benefit in the provision of relief materials by government was to cushion the effect of the loss and damage flood hazard has brought upon them. Also about (21.3%) are not aware about the relief material while, (6.3%) who have benefited pointed at adequacy and transparency as the main issues raised and these are mainly the community leaders who responded to the question. Also the local governments who are expected to understand the disaster risks and vulnerabilities of their communities were pushed back while the disbursement is done by the NEMA and NSEMA.

Table 4.12 Do you receive relief materials from government

Respondents	Frequency			Total
	Yes	No	Don't know	
Count	24	275	81	380
% Within Village Name	6.3%	72.4%	21.3%	100%
% within What are the impact of most damaging flood hazards occurring on infrastructure in the community	100%	100%	100%	100%
Total	6.3%	72.4%	21.3%	100%

4.10.5 Maintenance and upgrading of community infrastructure by the government

Maintenance and upgrading of infrastructure in Kede community by government can only be seen through the World Bank Rural Access and Mobility Project (RAMP) along Kudu/Ja'agi and Mokwa/Ja'agi roads which are among the main access to the community. While other damaged roads suffer neglect and other infrastructure such as the borehole, health centres and schools are either lacking necessary equipment and or are dilapidated. Table 4.13 reveals the lack of maintenance culture on the community infrastructure by the government. The analysis of respondents below shows that (44.8%) said there is no maintenance and upgrade on infrastructure which has produced difficult conditions, while (42%) claimed not to know anything about it and (13.2%) who cited the world bank RAMP project thinks the government has done something.

Table 4.13 Are there periodic maintenance and upgrading of infrastructure in the community by the government

		Yes	No	Don't know	Total
Total	Count	50	170	160	380
	% within Village Name	13.2%	44.8%	42.0%	100.0%
	% within are there periodic maintenance and upgrade of infrastructure in the community	100.0%	100.0%	100.0%	100.0%
	% of Total	13.2%	44.8%	42.0%	100.0%

4.10.6 Disaster prevention, preparedness and mitigation

Table 4.14 below shows that (69%) of the respondents claimed that government does not presently have any prevention, preparedness and mitigation plan or arrangement for the flood prone area however, few of the villages like Kpachita and Dzagun have big boats to help evacuate people of neighboring villages during flooding. While (26%) added that they do not know whether the government have it or not and (5%) of the respondents claimed that they have the required prevention, preparedness and mitigation plan on ground. As a result, this is an indicator of a major response failure to flood disaster by government in Kede floodplain community as people relied only on the little effort from few villages or individuals to rescue those who were in life threatening situations.

Table 4.14 Are there available plan for disaster Prevention, Preparedness and Mitigation

		Yes	No	Don't know	Total
Total	Count	19	262	99	380
	% within Village Name	5%	69%	26%	100.0%
	% within are there periodic maintenance and upgrade of infrastructure in the community	100.0%	100.0%	100.0%	100.0%
	% of Total	5%	69%	26%	100.0%

Willingness to embrace any plan by government to reduce the risk of flood disaster

On the willingness of the victims of incessant flooding in the study area to adopt new measures, Table 4.15 shows that all the villages are ready to embrace any plan by government to lessen the risk of flood disaster. This could be attributed to the level of their education and exposure or better still the impacts on their socio-economic activities which has prompted their decision.

Table 4.15 Willingness to embrace plans by government

		Yes	Total
Total	Count	380	380
	% within Village Name	100.0%	100.0%
	% within Are you willing to embrace any plan by government to reduce the risk of flood disaster in your community	100.0%	100.0%
	% of Total	100.0%	100.0%

4.11 Assessment of the Impacts of Disaster Risk Governance in reducing risk of Kede floodplain community

This sub-section examines the positive impacts of disaster risk governance system in the study area. Determining the effectiveness of DRG depends on other two main components of disaster governance: that is, accountability and transparency of the system (Ahrens & Rudolph, 2006).

Observing the adequacy of administrative frameworks in decreasing disaster risk requires information on the condition of society, the climate, and human activities just as the advancement of benchmarks and measures like markers to evaluate the system. In this research, questions were asked to examining the impact of DRG in the study area.

4.11.1 Reduction of flood hazard to a safe level

In the testing the impact of DRG in Kede floodplain; responses were obtained to the question: "with the existing of disaster management system in your community, do you now think the risk of flood hazard have been reduced to a safe level"**.** Figure 4.6 shows the level at which the people agreed that the existing disaster management system has attained.

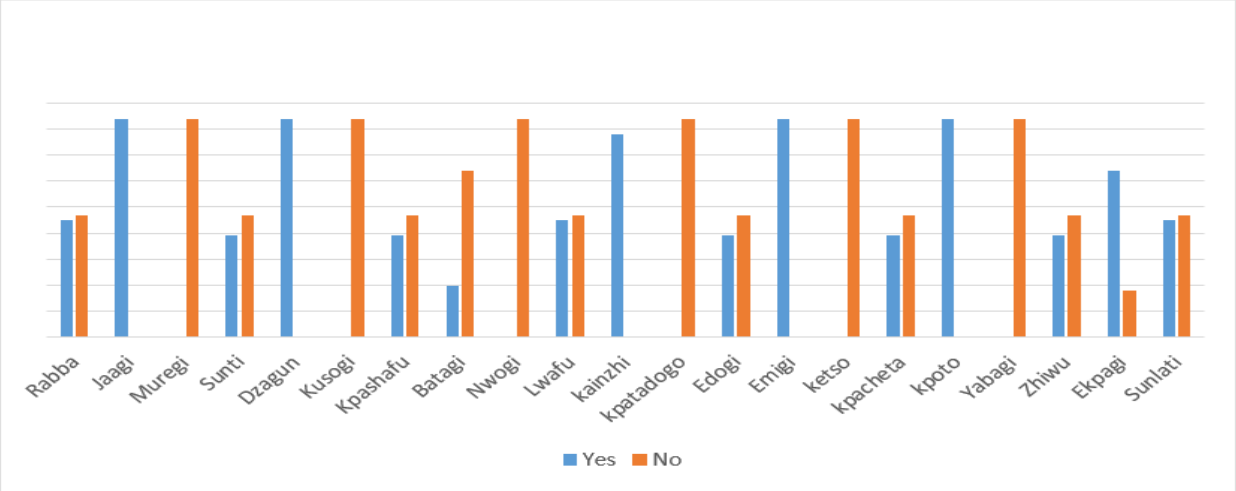

Figure 4.5 Reduction of flood hazard to a safe level

Meanwhile villages like Ja'agi, Dzagun, Batagi, kainzhi, Emigi, and Poto all believed that with the existing disaster management in their community, the risk of flood hazard has been reduced to a safe level. But the reverse is the case for villages like Muregi, Kusogi, Nwogi, Kpatadogo, Ketso, and Yabagi.

4.11.2 Flood forecast:

With the help of DRG system in Niger State, the prediction of possible flood incidents and its impacts are now common. From the trends, the research observed that flood situation in Kede floodplain may worsen in coming days according to latest hydrological predictions (NiMet, 2021). The situation in downstream parts of floodplain will mostly depend on the retention capacity available in the Kainji and Jebba dams. Hence, the need for preparation for mitigation measures for 2021 flooding season.

4.11.3 Were government awareness and early warning able to reduce human and property loss?

The government agencies create awareness and early warnings through mass media although, another contributing factor to property loss and fatalities are people who do not have access to radio or TV. Early warning alert to community workers and sensitizing the community leaders/people on the risk around and prevention. The information passed most time will be a generalized one suggesting a heavy rainfall without sufficient information on when to expect the flood, how people should behave during the rain and what are the prevention options available. Table 4.17 below reveals that (60%) of the respondents do not think the awareness by government has really helped in reduction in loss of their people's lives and livelihood and it is also evident in table 4.1 above. Another (30%) of the respondents do not know if it has really helped, while the remaining (10%) thinks it has help.

Table 4.16 Were government's awareness and early warnings able to reduce human and property loss

		Yes	No	Don't know	Total
Total	Count	40	230	110	380
	% within Village Name	10%	60%	30%	100.0%
	% within are there periodic maintenance and upgrade of infrastructure in the community	100.0%	100.0%	100.0%	100.0%
	% of Total	10%	60%	30%	100.0%

4.11.4 Effective measures to improve awareness and capacity building for future floods

Table 4.16 shows that (34.3%) of the respondents from experience, agreed that most effective measure to improve awareness and build the capacity of the members of the community is by encouraging people to engage in dry season farming. Another (33.1%), affirmed that residents building far away and maintaining reasonable distance is the most effective while another (32.6%), agreed on training and evacuation of people as the most effective measure to improve awareness and build capacity of the community members.

Table 4.17 Effective measures to improve awareness and capacity building of members

		Stop building close to the river	Encouraging people to engage in dry season farming	Training people on evacuation	Total
Total	Count	126	130	124	380
	% within Village Name	33.1%	34.3%	32.6%	100.0%
	% within what was the most effective measure to improve awareness and build the capacity of the members of the community	100.0%	100.0%	100.0%	100.0%
	% of Total	33.1%	34.3%	32.6%	100.0%

Do you think disaster management guidelines and framework is in agreement with DRR efforts here?

Disaster management framework is expected to be mainstreamed into every aspect disaster with a focus on DRR (Table 4.17). From the central government all the way down to the state, local government and other community committees. The local government officials and other organizations are responsible are for DRR in the Kede community, they have claimed not to be aware if the guidelines and framework are in conformity with DRR activities in the community.

e 4.18 Assessment of the National Disaster Management Framework in Kede floodplain, Mokwa

Key processes and Indicators	Availability	Remarks	instruments
Institutional Capacity	Setting up of required institutional arrangements for the implementation of disaster management within the Local Government levels.	NE	I
Coordination	i. Create horizontal and vertical coordination strategies to address synergy at the three tiers of Government and among stakeholders. ii. Promote efficient and effective administration of disaster management activities and operations.	ENO	I
Disaster Risk Assessment	Guide the need for disaster risk assessment and monitoring hazards, vulnerabilities and measuring coping/adaptation capacities to set priorities for risk reduction and effectiveness of stakeholders efforts.	O	G
Disaster Risk Reduction	Promote planning and implementation as DRR strategies to inform development oriented approaches to plans, programmes and projects that reduce disaster risks.	ENO	I
Disaster Prevention, Preparedness and Mitigation	Develop strategies to prevent the occurrence of such disasters from having devastating impact on people, infrastructures and the economy; curtail the occurrence of disaster events; and reduce the impact of disasters, if they do occur.	ENO	I
Disaster Response	Concentrate on the requirements for an integrated, coordinated policy that address rapid and effective response to disasters	ENO	I
Disaster Recovery	Emphasize strategies required for bringing back disaster affected area and victims to normalcy through rehabilitation and reintegration.	ENO	I
Facilitators and Enablers	Integrating roles of emergency management agencies; information management and communication; monitoring and evaluation; education and training; and public awareness and research. It also covers requisite funding arrangement for disaster Management	O	I

Availability: NE= non-existent; ENO= existent but non-operational; O= operational
Remarks: G= Good; S= Satisfactory; I= inadequate
Source: Stephan, (2008)

4.12 Summary of findings

The research findings have shown that government response to disaster risk reduction in Kede floodplain area is grossly inadequate and this is key to building a resilient community. The findings from the study reveals: -

The government response in creating awareness and early warnings through mass media would have succeeded but for another contributing factor to property loss and fatalities are people who do not have access to radio or TV. The study reveals that (60%) of the respondents do not think the awareness by government has really helped in reducing loss of their people's lives and livelihood. Another (30%) of the respondents do not know if it has helped, while the remaining (10%) thinks it has help.

Among the major responsibilities of government in disaster risk reduction is to ensure that the local governments and the community have the right capacity to carry out disaster risk reduction activities. The study discovered (76%) of the respondents have never participated in any form of disaster risk reduction training or programme organized by government. While (17%) added that they do not know what capacity building for the LG or the community DRR entails and (7%) of the respondents claimed that they have the required capacity on DRR. The challenge is to build up a planning process where people participate, decide and make plans about their community together with the local government authorities, based on their capacities and resources.

The study reveals that, there has never been any time where risk and vulnerability assessment has been carried out in the Kede floodplain area. According to the result (80%) of the respondents confirmed there is no assessment done while, (20%) of the respondents do not know if it was done or not. Identification of high risk hazards through community risk

assessment will avail the local government authorities with practical experience in assessing their risk environment, determining the vulnerabilities of their local communities, and taking the appropriate actions to mitigate them by identification of priority projects for the community.

The study has also revealed lack of maintenance culture on the community infrastructure by the government. The analysis of respondents shows that (44.8%) said there is no maintenance and upgrade on infrastructure, while (42%) claimed not to know anything about it and (13.2%) who cited the world bank RAMP project thinks the government has done something.

The study has also revealed that (69%) of the respondents claimed that government does not presently have any prevention, preparedness and mitigation plan or arrangement for the flood prone area however, few of the villages like Kpachita and Dzagun have big boats to help evacuate people of neighboring villages during flooding. While (26%) added that they do not know whether the government have it or not and (5%) of the respondents who claimed that they have the required prevention, preparedness and mitigation plan on ground. As a result, this is a major response failure to flood disaster by government in Kede floodplain community as people relied only on the little effort from few villages or individuals to rescue those who were in life threatening situations.

CHAPTER FIVE

5.0 RECOMMENDATION AND CONCLUSION

5.1 Recommendation

In view of the result of this study, the following recommendations are made in order to improve disaster risk reduction through government response and responsibilities in Kede floodplain community, Niger state and Nigeria at large.

i. There is a need to institutionalize capacity building processes for disaster risk reduction at the local government and community leadership levels. Communities are always the first responders to emergencies, and it falls under the jurisdiction of the local government to help communities respond. It is very important to build local capacity for this reason.

ii. Hazard identification and risk assessment programme must be established. This will help the local authorities and community leaders achieve practical experience in assessing their risk environment, determining the vulnerabilities of their local communities, and taking the appropriate actions to mitigate them.

iii. Investments to make critical infrastructure such as water, drainage, roads, schools, and hospitals resilient to disaster risks should be made visible to ensure timely maintenance or upgrade.

iv. Community prevention, preparedness and mitigation measures in effect is as costly as public investments in reducing victims from disasters, and local governments should play a central role in community education and training.

5.2 Conclusion

The climate change issue has since made it obvious to the world that disasters are unavoidable, we just have to live safely with them. The global manuals of disaster risk reduction are practices expected to be replicated at the national, regional and local levels. There is also a need for the establishment of functional programs or sensitization on disaster preparedness, prevention, and mitigation, resilience, and recovery which is up to the accepted global standard in the face of the recurring nature of the disaster.

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APPENDIX A

		Male		Female			
		N	%	N	%	N	%
Village Name	Rabba	17	5.2%	1	2.0%	18	4.7%
	Ja'agi	15	4.5%	3	6.0%	18	4.7%
	Muregi	15	4.5%	4	8.0%	19	4.6%
	Sunti	17	5.2%	0	0.0%	17	4.3%
	Dzagun	16	4.8%	2	4.0%	18	4.7%
	Kusogi	16	4.8%	3	6.0%	19	4.6%
	Kpashafu	18	5.5%	0	0.0%	18	4.7%
	Batagi	16	4.8%	3	6.0%	19	4.3%
	Nwogi	16	4.8%	2	4.0%	18	4.7%
	Lwafu	15	4.5%	3	6.0%	18	4.7%
	Kainzhi	16	4.8%	2	4.0%	18	4.7%
	Kpatadogo	15	4.5%	3	6.0%	18	4.7%
	Edogi Tula	17	5.2%	1	2.0%	18	4.7%
	Emigi	16	4.8%	2	4.0%	18	4.7%
	Ketso	15	4.5%	3	6.0%	18	4.7%
	Kpacheta	16	4.8%	2	4.0%	18	4.7%
	Poto	15	4.5%	3	6.0%	18	4.7%
	Yabagi	14	4.2%	4	8.0%	18	4.7%
	Zhiwu	16	4.8%	2	4.0%	18	4.7%
	Ekpagi	16	4.8%	2	4.0%	18	4.7%
	Sunlati	13	3.9%	5	10.0%	18	4.7%
Total		330	100.0%	50	100.0%	380	100.0%

APPENDIX B

		Household Head Status					
		Yes		No		Total	
		N	%	N	%	N	%
Village Name	Rabba	17	4.9%	1	3.0%	18	4.7%
	Ja'agi	15	4.3%	3	9.1%	18	4.7%
	Muregi	15	4.3%	4	12.1%	19	5.0%
	Sunti	17	4.9%	0	0.0%	17	4.5%
	Dzagun	18	5.2%	0	0.0%	18	4.7%
	Kusogi	12	3.5%	7	21.2%	19	5.0%
	Kpashafu	16	4.6%	2	6.1%	18	4.7%
	Batagi	17	4.9%	2	6.1%	19	5.0%
	Nwogi	15	4.3%	3	9.1%	18	4.7%
	Lwafu	18	5.2%	0	0.0%	18	4.7%
	Kainzhi	16	4.6%	2	6.1%	18	4.7%
	Kpatadogo	15	4.3%	3	9.1%	18	4.7%
	Edogi Tula	17	4.9%	1	3.0%	18	4.7%
	Emigi	18	5.2%	0	0.0%	18	4.7%
	Ketso	17	4.9%	1	3.0%	18	4.7%
	Kpacheta	18	5.2%	0	0.0%	18	4.7%
	Poto	18	5.2%	0	0.0%	18	4.7%
	Yabagi	15	4.3%	3	9.1%	18	4.7%
	Zhiwu	17	4.9%	1	3.0%	18	4.7%
	Kkpagi	18	5.2%	0	0.0%	18	4.7%
	Sunlati	18	5.2%	0	0.0%	18	4.7%
Total		347	100.0%	33	100.0%	380	100.0%

APPENDIX C

		Profession							
		Farmer		Trader		Fishing		Total	
		N	%	N	%	N	%	N	%
	Rabba	15	7%	2	6.5%	1	0.7%	18	4.7%
	Ja'agi	17	7.9%	1	3.2%	0	0.0%	18	4.7%
	Muregi	16	7.5%	0	0.0%	3	2.0%	19	5%
	Sunti	6	2.8%	1	3.2%	10	7.4%	17	4.5%
	Dzagun	6	2.8%	1	3.2%	11	8.1%	18	4.7%
	Kusogi	6	2.8%	3	9.7%	10	7.4%	19	5%
	Kpashafu	10	4.7%	2	6.5%	6	4.4%	18	4.7%
	Batagi	3	1.4%	1	3.2%	15	11.1%	19	5%
	Nwogi	0	0.0%	0	0.0%	18	13.3%	18	4.7%
	Lwafu	3	1.4%	2	6.5%	13	9.6%	18	4.7%
Village Name	Kainzhi	3	1.4%	1	3.2%	14	10.4%	18	4.7%
	Kpatadogo	0	0.0%	0	0.0%	18	11.1%	18	4.7%
	Edogi Tula	13	6.7%	4	12.9%	1	0.7%	18	4.7%
	Emigi	17	7.9%	1	3.2%	0	0.0%	18	4.7%
	Ketso	14	6.5%	0	0.0%	4	3%	18	4.7%
	Kpacheta	12	5.6%	2	6.5%	4	3%	18	4.7%
	Poto	14	6.5%	4	12.9%	0	0.0%	18	4.7%
	Yabagi	15	7%	0	0.0%	3	2.2%	18	4.7%
	Zhiwu	11	5.2%	4	12.9%	2	1.5%	18	4.7%
	Kpagi	18	8.4%	0	0.0%	0	0.0%	18	4.7%
	Sunlati	14	6.5%	2	6.5%	2	1.5%	18	4.7%
Total		214	100.0%	31	100.0%	135	100.0%	380	100.0%

APPENDIX D

		Marital Status					
		Married		Divorced		Total	
		N	%	N	%	N	%
SVillage Name	Rabba	14	4.1%	4	11.1%	18	4.7%
	Ja'agi	18	5.2%	0	0.0%	18	4.7%
	Muregi	19	5.0%	0	0.0%	19	5%
	Sunti	14	4.1%	3	8.3%	17	4.5%
	Dzagun	18	5.2%	0	0.0%	18	4.7%
	Kusogi	19	5.5%	0	0.0%	19	5%
	Kpashafu	13	3.8%	5	13.8%	18	4.7%
	Batagi	19	5.5%	0	0.0%	19	5%
	Nwogi	18	5.2%	0	0.0%	18	4.7%
	Lwafu	15	4.4%	3	8.3%	18	4.7%
	Kainzhi	18	5.2%	0	0.0%	18	4.7%
	Kpatadogo	18	5.2%	0	0.0%	18	4.7%
	Edogi Tula	13	3.8%	5	13.8%	18	4.7%
	Emigi	18	5.2%	0	0.0%	18	4.7%
	Ketso	18	5.0%	0	0.0%	18	4.7%
	Kpacheta	14	4.1%	4	11.1%	18	4.7%
	Poto	18	5.2%	0	0.0%	18	4.7%
	Yabagi	18	5.0%	0	0.0%	18	4.7%
	Zhiwu	13	3.8%	5	13.8%	18	4.7%
	Kkpagi	18	5.2%	0	0.0%	18	4.7%
	Sunlati	10	2.9%	8	22.2%	18	4.7%
Total		343	100.0%	36	100.0%	380	100.0%

APPENDIX E

			Major infrastructures that are likely to be affected					
			Road	Economic trees & Roads	Economic trees	Potable Water	Potable Water & Road	Total
Village Name	Rabba	Expected Count	12.2	1.3	1.3	.9	.3	16.0
		% within Village Name	18.8%	25.0%	37.5%	18.8%	0.0%	100.0%
		% within major infrastructures that are likely to be affected	1.1%[a]	14.3%[b]	20.7%[b]	15.0%[b]	0.0%[a, b]	4.6%
		% of Total	0.9%	1.1%	1.7%	0.9%	0.0%	4.6%
	Ja'agi	Expected Count	11.4	1.2	1.2	.9	.3	15.0
		% within Village Name	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
		% within major infrastructures that are likely to be affected	5.6%[a]	0.0%[a]	0.0%[a]	0.0%[a]	0.0%[a]	4.3%
		% of Total	4.3%	0.0%	0.0%	0.0%	0.0%	4.3%
	Mureg i	Expected Count	12.2	1.3	1.3	.9	.3	16.0
		% within Village Name	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
		% within major infrastructures that are likely to be affected	6.0%[a]	0.0%[a]	0.0%[a]	0.0%[a]	0.0%[a]	4.6%
		% of Total	4.6%	0.0%	0.0%	0.0%	0.0%	4.6%
	Sunti	Expected Count	11.4	1.2	1.2	.9	.3	15.0
		% within Village Name	20.0%	33.3%	26.7%	6.7%	13.3%	100.0%
		% within major infrastructures	1.1%[a]	17.9%[b]	13.8%[b]	5.0%[a, b]	33.3%[b]	4.3%

	that are likely to be affected						
	% of Total	0.9%	1.4%	1.1%	0.3%	0.6%	4.3%
	Expected Count	11.4	1.2	1.2	.9	.3	15.0
	% within Village Name	100.0%	0.0%	0.0%	0.0%	0.0%	100.0 %
Dzagun	% within major infrastructures that are likely to be affected	5.6%[a]	0.0%[a]	0.0%[a]	0.0%[a]	0.0%[a]	4.3%
	% of Total	4.3%	0.0%	0.0%	0.0%	0.0%	4.3%
	Expected Count	12.2	1.3	1.3	.9	.3	16.0
	% within Village Name	100.0%	0.0%	0.0%	0.0%	0.0%	100.0 %
Kusogi	% within major infrastructures that are likely to be affected	6.0%[a]	0.0%[a]	0.0%[a]	0.0%[a]	0.0%[a]	4.6%
	% of Total	4.6%	0.0%	0.0%	0.0%	0.0%	4.6%
	Expected Count	11.4	1.2	1.2	.9	.3	15.0
	% within Village Name	20.0%	26.7%	26.7%	26.7%	0.0%	100.0 %
Kpashafu	% within major infrastructures that are likely to be affected	1.1%[a]	14.3%[b]	13.8%[b]	20.0%[b]	0.0%[a, b]	4.3%
	% of Total	0.9%	1.1%	1.1%	1.1%	0.0%	4.3%
	Expected Count	11.4	1.2	1.2	.9	.3	15.0
	% within Village Name	100.0%	0.0%	0.0%	0.0%	0.0%	100.0 %
Batagi	% within major infrastructures that are likely to be affected	5.6%[a]	0.0%[a]	0.0%[a]	0.0%[a]	0.0%[a]	4.3%
	% of Total	4.3%	0.0%	0.0%	0.0%	0.0%	4.3%
	Expected Count	12.2	1.3	1.3	.9	.3	16.0

	% within Village Name	100.0%	0.0%	0.0%	0.0%	0.0%	100.0 %
Nwogi	% within major infrastructures that are likely to be affected	6.0%a	0.0%a	0.0%a	0.0%a	0.0%a	4.6%
	% of Total	4.6%	0.0%	0.0%	0.0%	0.0%	4.6%
	Expected Count	12.2	1.3	1.3	.9	.3	16.0
	% within Village Name	25.0%	25.0%	25.0%	18.8%	6.3%	100.0 %
Lwafu	% within major infrastructures that are likely to be affected	1.5%a	14.3%b	13.8%b	15.0%b	16.7%b	4.6%
	% of Total	1.1%	1.1%	1.1%	0.9%	0.3%	4.6%
	Expected Count	10.7	1.1	1.2	.8	.2	14.0
	% within Village Name	100.0%	0.0%	0.0%	0.0%	0.0%	100.0 %
Kainzhi	% within major infrastructures that are likely to be affected	5.2%a	0.0%a	0.0%a	0.0%a	0.0%a	4.0%
	% of Total	4.0%	0.0%	0.0%	0.0%	0.0%	4.0%
	Expected Count	12.2	1.3	1.3	.9	.3	16.0
	% within Village Name	100.0%	0.0%	0.0%	0.0%	0.0%	100.0 %
Kpatadogo	% within major infrastructures that are likely to be affected	6.0%a	0.0%a	0.0%a	0.0%a	0.0%a	4.6%
	% of Total	4.6%	0.0%	0.0%	0.0%	0.0%	4.6%
	Expected Count	11.4	1.2	1.2	.9	.3	15.0
Edogi Tula	% within Village Name	20.0%	26.7%	26.7%	20.0%	6.7%	100.0 %
	% within major infrastructures	1.1%a	14.3%b	13.8%b	15.0%b	16.7%b	4.3%

	that are likely to be affected						
	% of Total	0.9%	1.1%	1.1%	0.9%	0.3%	4.3%
	Expected Count	11.4	1.2	1.2	.9	.3	15.0
	% within Village Name	100.0%	0.0%	0.0%	0.0%	0.0%	100.0 %
Emigi	% within major infrastructures that are likely to be affected	5.6%[a]	0.0%[a]	0.0%[a]	0.0%[a]	0.0%[a]	4.3%
	% of Total	4.3%	0.0%	0.0%	0.0%	0.0%	4.3%
	Expected Count	12.2	1.3	1.3	.9	.3	16.0
	% within Village Name	100.0%	0.0%	0.0%	0.0%	0.0%	100.0 %
Ketso	% within major infrastructures that are likely to be affected	6.0%[a]	0.0%[a]	0.0%[a]	0.0%[a]	0.0%[a]	4.6%
	% of Total	4.6%	0.0%	0.0%	0.0%	0.0%	4.6%
	Expected Count	11.4	1.2	1.2	.9	.3	15.0
	% within Village Name	20.0%	33.3%	20.0%	20.0%	6.7%	100.0 %
Kpacheta	% within major infrastructures that are likely to be affected	1.1%[a]	17.9%[b]	10.3%[b]	15.0%[b]	16.7%[b]	4.3%
	% of Total	0.9%	1.4%	0.9%	0.9%	0.3%	4.3%
	Expected Count	11.4	1.2	1.2	.9	.3	15.0
	% within Village Name	100.0%	0.0%	0.0%	0.0%	0.0%	100.0 %
Poto	% within major infrastructures that are likely to be affected	5.6%[a]	0.0%[a]	0.0%[a]	0.0%[a]	0.0%[a]	4.3%
	% of Total	4.3%	0.0%	0.0%	0.0%	0.0%	4.3%
	Expected Count	12.2	1.3	1.3	.9	.3	16.0

		% within Village Name	100.0%	0.0%	0.0%	0.0%	0.0%	100.0 %
	Yabagi	% within major infrastructures that are likely to be affected	6.0%a	0.0%a	0.0%a	0.0%a	0.0%a	4.6%
		% of Total	4.6%	0.0%	0.0%	0.0%	0.0%	4.6%
		Expected Count	11.4	1.2	1.2	.9	.3	15.0
		% within Village Name	33.3%	13.3%	26.7%	20.0%	6.7%	100.0 %
	Zhiwu	% within major infrastructures that are likely to be affected	1.9%a	7.1%a, b	13.8%b	15.0%b	16.7%b	4.3%
		% of Total	1.4%	0.6%	1.1%	0.9%	0.3%	4.3%
		Expected Count	13.7	1.4	1.5	1.0	.3	18.0
		% within Village Name	100.0%	0.0%	0.0%	0.0%	0.0%	100.0 %
	Kkpagi	% within major infrastructures that are likely to be affected	6.7%a	0.0%a	0.0%a	0.0%a	0.0%a	5.1%
		% of Total	5.1%	0.0%	0.0%	0.0%	0.0%	5.1%
		Expected Count	30.5	3.2	3.3	2.3	.7	40.0
		% within Village Name	100.0%	0.0%	0.0%	0.0%	0.0%	100.0 %
	Sunlati	% within major infrastructures that are likely to be affected	15.0%a	0.0%b	0.0%b	0.0%a, b	0.0%a, b	11.4%
		% of Total	11.4%	0.0%	0.0%	0.0%	0.0%	11.4%
		Expected Count	282.0	32.0	33.0	24.0	9.0	380.0
		% within Village Name	76.3%	8.0%	8.3%	5.7%	1.7%	100.0 %
Total		% within major infrastructures that are likely to be affected	100.0%	100.0%	100.0%	100.0%	100.0%	100.0 %

	% of Total	76.3%8.0%	8.3%	5.7%	1.7%	100.0 %

Each subscript letter denotes a subset of major infrastructures that are likely to be affected categories whose column proportions do not differ significantly from each other at the .05 level.

APPENDIX F

			Is there any evacuation plan		
			Yes	No	Total
Village Name	Rabba	Count	0	18	18
		% within Village Name	0.0%	100.0%	100.0%
		% within Is there any evacuation plan	0.0%	7.6%	4.7%
		% of Total	0.0%	4.7%	4.7%
	Ja'agi	Count	0	18	18
		% within Village Name	0.0%	100.0%	100.0%
		% within Is there any evacuation plan	0.0%	7.1%	4.7%
		% of Total	0.0%	4.7%	4.7%
	Muregi	Count	19	0	19
		% within Village Name	100.0%	0.0%	100.0%
		% within Is there any evacuation plan	11.5%	0.0%	5%
		% of Total	5%	0.0%	5%
	Sunti	Count	0	17	17
		% within Village Name	0.0%	100.0%	100.0%
		% within Is there any evacuation plan	0.0%	7.1%	4.5%
		% of Total	0.0%	4.5%	4.5%
	Dzagun	Count	0	18	18
		% within Village Name	0.0%	100.0%	100.0%

	% within Is there any evacuation plan	0.0%	7.1%	4.7%
	% of Total	0.0%	4.7%	4.7%
Kusogi	Count	19	0	19
	% within Village Name	100.0%	0.0%	100.0%
	% within Is there any evacuation plan	11.5%	0.0%	5%
	% of Total	5%	0.0%	5%
Kpashafu	Count	0	18	18
	% within Village Name	0.0%	100.0%	100.0%
	% within Is there any evacuation plan	0.0%	7.1%	4.7%
	% of Total	0.0%	4.7%	4.7%
Batagi	Count	0	19	19
	% within Village Name	0.0%	100.0%	100.0%
	% within Is there any evacuation plan	0.0%	7.1%	5%
	% of Total	0.0%	5%	5%
Nwogi	Count	18	0	18
	% within Village Name	100.0%	0.0%	100.0%
	% within Is there any evacuation plan	11.5%	0.0%	4.7%
	% of Total	4.7%	0.0%	4.7%
Lwafu	Count	0	18	18
	% within Village Name	0.0%	100.0%	100.0%
	% within Is there any evacuation plan	0.0%	7.6%	4.7%
	% of Total	0.0%	4.7%	4.7%
Kainzhi	Count	0	18	18
	% within Village Name	0.0%	100.0%	100.0%

	% within Is there any evacuation plan	0.0%	6.6%	4.7%
	% of Total	0.0%	4.7%	4.7%
Kpatadogo	Count	18	0	18
	% within Village Name	100.0%	0.0%	100.0%
	% within Is there any evacuation plan	11.5%	0.0%	4.7%
	% of Total	4.7%	0.0%	4.7%
Edogi Tula	Count	0	18	18
	% within Village Name	0.0%	100.0%	100.0%
	% within Is there any evacuation plan	0.0%	7.1%	4.7%
	% of Total	0.0%	4.7%	4.7%
Emigi	Count	0	18	18
	% within Village Name	0.0%	100.0%	100.0%
	% within Is there any evacuation plan	0.0%	7.1%	4.7%
	% of Total	0.0%	4.7%	4.7%
Ketso	Count	18	0	18
	% within Village Name	100.0%	0.0%	100.0%
	% within Is there any evacuation plan	11.5%	0.0%	4.7%
	% of Total	4.7%	0.0%	4.7%
Kpacheta	Count	0	18	18
	% within Village Name	0.0%	100.0%	100.0%
	% within Is there any evacuation plan	0.0%	7.1%	4.7%
	% of Total	0.0%	4.7%	4.7%
Poto	Count	0	18	18
	% within Village Name	0.0%	100.0%	100.0%

		% within Is there any evacuation plan	0.0%	7.1%	4.7%
		% of Total	0.0%	4.7%	4.7%
	Yabagi	Count	18	0	18
		% within Village Name	100.0%	0.0%	100.0%
		% within Is there any evacuation plan	11.5%	0.0%	4.7%
		% of Total	4.7%	0.0%	4.7%
	Zhiwu	Count	0	18	18
		% within Village Name	0.0%	100.0%	100.0%
		% within Is there any evacuation plan	0.0%	7.1%	4.7%
		% of Total	0.0%	4.7%	4.7%
	Kkpagi	Count	3	15	18
		% within Village Name	16.7%	83.3%	100.0%
		% within Is there any evacuation plan	2.2%	7.1%	4.7%
		% of Total	0.8%	3.9%	4.7%
	Sunlati	Count	18	0	18
		% within Village Name	100.0%	0.0%	100.0%
		% within Is there any evacuation plan	7.1%	0.0%	4.7%
		% of Total	71%	0.0%	4.7%
Total		Count	131	249	380
		% within Village Name	34.5%	65.5%	100.0%
		% within Is there any evacuation plan	100.0%	100.0%	100.0%
		% of Total	34.5%	65.5%	100.0%

APPENDIX G

		Are you aware if there is any national disaster management policy?					
		Yes		No		Total	
		N	%	N	%	N	%
Village Name	Rabba	11	11.8%	7	2.4%	18	4.7%
	Ja'agi	0	0.0%	18	6.3%	18	4.7%
	Muregi	0	0.0%	19	6.6%	19	5%
	Sunti	11	11.8%	6	2.1%	17	4.5%
	Dzagun	0	0.0%	18	6.3%	18	4.7%
	Kusogi	0	0.0%	19	6.6%	19	5%
	Kpashafu	13	14.0%	5	1.7%	18	4.7%
	Batagi	0	0.0%	19	6.6%	19	5%
	Nwogi	0	0.0%	18	6.3%	18	4.7%
	Lwafu	10	10.8%	8	2.8%	18	4.7%
	Kainzhi	0	0.0%	18	6.3%	18	4.7%
	Kpatadogo	0	0.0%	18	6.3%	18	4.7%
	Edogi Tula	12	12.9%	6	2.1%	18	4.7%
	Emigi	0	0.0%	18	6.3%	18	4.7%
	Ketso	0	0.0%	18	6.3%	18	4.7%
	Kpachetа	14	15.1%	4	1.4%	18	4.7%
	Poto	0	0.0%	18	6.3%	18	4.7%
	Yabagi	0	0.0%	18	6.3%	18	4.7%
	Zhiwu	13	14.0%	5	1.7%	18	4.7%
	Kkpagi	0	0.0%	18	6.3%	18	4.7%
	Sunlati	9	9.7%	9	3.1%	18	4.7%
Total		93	100.0%	287	100.0%	380	100.0%

APPENDIX H

URBAN AND REGIONAL PLANNING DEPARTMENT

FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA, NIGER

STATE POSTGRADUATE QUESTIONNAIRE Questionnaire for

Kede Community Members

1. Name of Village: ---------- Date ----------
2. Name: ----------
3. Gender: a. male ☐ b. female ☐
4. Household head: a. yes ☐ b. no ☐
5. Profession: a. farmer ☐ b. Trader ☐ c. Civil servant ☐ d. House wife ☐ e. Student ☐ f. Teacher ☐ g. Others Specify ----------
6. Marital Status: a. Married ☐ b. Single ☐ c. Divorced ☐ d. Others ----------
7. Literacy level: a. Primary ☐ b. Secondary ☐ c. Tertiary ☐ d. Iliterate ☐
8. Are there communities that organize themselves to monitor potential disasters? i.e. monitor river level a. yes ☐ b. no ☐
9. Does your community have a disaster management plans in place? a. yes ☐ a. no ☐
10. Aside personal properties being affected what are the major infrastructures that are likely to be affected by future disasters? ----------
11. Is there any evacuation plan for the vulnerable communities? a. yes ☐ b. no ☐
12. Are you aware if there is any national disaster management policy, act or related legislation? Specify.
13. Is there any training or awareness program organized by the local government or the community on disaster risk reduction (DRR) or Disaster Management? a. yes ☐ b. no ☐
14. If yes, how useful is it? a. Useful b. Very useful and applicable ☐ c. Not useful
15. Are you willing to embrace any plan by government or other institutions to reduce the risk of flood disaster in your community? a. yes ☐ b. no ☐
16. What are the impacts of most damaging flood hazards occurring on infrastructure in the community? ----------
17. What health-related problems have occurred in the community when a disaster strikes? a. Severe injuries ☐ b. Disease outbreaks ☐ c. Water shortages/ contamination ☐ d. Food shortages e. Others specify …….

18. What are the impacts of the flood disaster on the socio-economic activities of the people of Kede? ----------

19. What are your roles in disaster situation? ----------

20. To what extent have the needs of men, women, boys and girls are addressed in disaster situation in your own opinion.

Needs of:	**Fully addressed**	**Partially addressed**	**Not addressed**
a. Men			
How?			
b. Women			
How?			
c. Boys			
How?			
d. Girls			
How?			

21. With the existing disaster management in your community, do you now think the risk of flood hazard have been reduced to a safe level? a. yes ☐ b. no ☐

22. Do you think you would not experience flood hazard during the next rainy season? a. yes ☐ b.no ☐

23. From your experience, what was the most effective measure to improve awareness and build the capacity of the members of the community? ----------

24. Kindly narrate any other experience you have encountered ----------

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URBAN AND REGIONAL PLANNING DEPARTMENT

FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA, NIGER STATE

POSTGRADUATE QUESTIONNAIRE

Questionnaire for Community Committee/Officials of Kede on Disaster Management

1. Name of Village: ---------- Date ----------

2. Name: ----------

3. Gender: a. male ☐ b. female ☐

4. You are a representative of which organization? ----------

5. Designation ----------

6. Literacy level: a. Primary ☐ b. Secondary ☐ c. Tertiary ☐ d. Iliterate ☐

7. Did you receive training from Government on Disaster Risk Reduction? a. yes ☐ b. no ☐

8. How many committees do you have on disaster risk reduction and what are their names? ----------
---
---

9. Are you trained on any disaster reduction skills? a. yes ☐ b. no ☐

10. If yes, are they useful? a. Useful ☐ b. Very useful and applicable ☐ c. Not useful ☐

11. Are you able to plan and implement measures to reduce human and property loss to flood disaster? a. yes ☐ b. no ☐

12. Do you think disaster management guidelines and framework is in agreement with disaster risk reduction efforts here? a. yes ☐ b. no ☐ c. don't know ☐

13. If yes, how? ----------
---

14. Does your organization have disaster management plan in place? a. yes ☐ b. no ☐ c. don't know ☐

15. Are you aware of your roles and responsibility in disaster situation? a. yes ☐ b. no ☐ c. don't know ☐

16. If yes, what is your role? ----------

17. To what extent have the needs of men, women, boys and girls are addressed in disaster situation in your own opinion.

Needs of:	**Fully addressed**	**Partially addressed**	**Not addressed**
e. Men			
How?			
f. Women			
How?			
g. Boys			

How?			
h. Girls			
How?			

18. Have you ever conduct vulnerability or risk assessment on the Kede floodplain? a. yes ☐ b. no ☐ c. don't know ☐

19. From your experience, what was the most effective measure to improve awareness and build the capacity of the members of the community? ----------

20. In what ways is the Government and other stakeholders communicating and creating Awareness in disaster reduction? ----------

21. Mitigation and Prevention are the key in Preparedness activities, what are the planned activities in this regard? ----------

22. Has disaster management training been undertaken to build capacities in the communities of the floodplain? a. yes ☐ b. no ☐

23. If yes, how often? a. Once in a while ☐ b. after disaster event ☐

24. Kindly share lessons you have learnt as representative of government, NGO, community committee member e.t.c ----------