

Preparation and Response Systems to Emergencies in Nigeria's Middle Belt

Findings from a qualitative baseline research

July 2019



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List of Acronyms

BENGO NET	Benue State Non-Governmental Organizations Network
CAID / CA	Christian Aid Nigeria
CAN	Christian Association of Nigeria
CBOs	Community Based Organizations
DRR	Disaster Risk Reduction
DRM	Disaster Risk Management
ECHO -	European Civil Protection and Humanitarian Operations
E4E	Early Warning for Early Response
EM-DAT	Emergency Events Database
ER	Emergency Response
EWS	Early Warning System
FGD	Focused Group Discussion
FRSC	Federal Road Safety Corps
FSS	Federal Fire Service
IOM	International Organization for Migration
JNI	Jama'atul Nasril Islam
KADSACA	Kaduna State Action Committee on Aids
KAPWA	Kaduna State Public Works Agency
KASUPDA	Kaduna State Urban Planning Development Agency
KEPA	Kaduna Environmental Protection Agency
KII	Key Informant Interview
LGA	Local Government Area
NA	Nigerian Army
NAF	Nigerian Air force
NEMA	National Emergency Management Agency
NGOs	Non-Governmental Organizations
NIHSA	Nigeria Hydrological Services Agency
NIMET	Nigeria Metrological Agency
NOA	National Orientation Agency
NSCDC	Nigerian Security and Civil Defence Corps
NPF	Nigerian Police Force
PVCA	Participatory Vulnerability and Capacity Assessment
RUWASSA	Rural Water Supply & Sanitation Agency
SEMA	State Emergency Management Agency
SIP	Sector Implementation Plan
SPSS	Statistical Package for Social Sciences
SSS	State Security Service.
UNICEF	United Nations Children's Fund
UNDP	United Nations Development Program

Executive summary

Flooding is the most common natural hazard in Nigeria and it is widespread. In recent years, its occurrence has become a yearly event in most communities. It is usually caused by a combination of high rainfall intensity and unwholesome land use practices, especially in urban and semi – urban areas. In some places, river flooding is also common, especially in communities situated on the banks of rivers. This phenomenon has therefore drawn the attention of Christian AID Nigeria, an International NGO, in collaboration with ECHO, to undertaking a Project on Early Warning and Early Response to Flood Disasters in the Middle Belt Region of Nigeria. This pilot Project is focused on three States of Benue, Kaduna and Plateau. The primary objectives of the Project include a Baseline Survey of the nature, causes and effects the flood incidents, flood risk management mechanisms, human capacity development, Institution strengthening, developing Early Warning System, as well as Action –Learning –Research for sustaining this Project in these States. The scope of study is restricted to the middle belt of Nigeria, focusing on three pilot states of Benue, Kaduna and Plateau. The Project covers three LGAs in each of these States: Agatu, Guma and Makurdi in Benue State; Chikun, Kaduna North and Kaduna South in Kaduna State; Jos East, Jos North and Shendam in Plateau State. Three Communities were also selected from each LGA. Thus, the Project is covering nine LGAs and twenty-seven communities in the three States. These States, LGAs and Communities were selected for this survey based on the report of an earlier study by Christian AID, Nigeria which indicates that these locations have recurring incidences of flood disaster. This study is focusing on flood hazard only. It is essentially concerned with evaluating the Institutional framework for Disaster Risk Mitigation in these States, as well as assessing the status of EWS, coordination mechanism, Preparedness and Response capacities. The baseline survey covered the period of March 1st, 2018 to July 30th, 2018.

The survey used multiple techniques at various political strata within each State to achieve the objectives of the study. The purpose of this multi- layered data collection technique is to be able to triangulate results from these various sources. The types of data needed for the survey were essentially those related to the characteristics of the flood hazard, vulnerability and capacity assessment of target Communities, nature and capacities of disaster management institutions in each State, as well as an assessment of the types and effectiveness of Early Warning Systems for Flood hazard in these States. These data were all collected from the field as primary data. Data collection was carried out at the State, Community and Household levels. This was done to obtain some details of the issues under consideration. At the State level, all the necessary data were obtained from two major sources: (i) a three –day stakeholders workshop organized at each State Capital where semi- structured questionnaires were used to solicit responses from participants; and (ii) Key Informant Interview (KII) of key stakeholders in disaster management in each state, such as, personnel of SEMA, line Ministries and Agencies. KII tool guide was used for this purpose. At the Community level, two data collection techniques were used: (i) Focused Group Discussion (FGD) with different males and female groups in two Communities in each State, using an FGD tools guide; and (ii) Participatory Vulnerability and Capacity Assessment (PVCA) in one Community in each State with emphasis on Problem tree, Historical Timeline, Seasonal Calendar, Venn Diagram and Community Mapping. At the Household level, a set of semi-structured questionnaires were administered to households in all the nine Communities in each State. The sample size for Households was determined by obtaining ten percent of the approximate total number of households in each community provided by the community heads. The Kobo Collect data collection tool was used for this survey. This tool was pre-tested and validated for field Enumerators in the

Wadata area of Makurdi, Benue State. All the assessment instruments for data collection in this survey were subjected to reliability and validity tests before use.

Results obtained indicate that in Benue State, Flooding occurs yearly in all these communities, usually between the months of August, September and October. Two types of flooding are experienced in the State: (i) Urban flooding caused by inadequate drainage, partially blocked drainages, poor urban plan and high intensity rainfall; (ii) Overflow of river Benue onto settlements located on the banks of the river. Each episode of the flood disaster affects hundreds of people and cause damage to houses, properties, businesses, diseases and infrastructures. The State has a disaster management institution called Benue SEMA. It was established by the law of the State House of Assembly in 2006 with the specific mandate of coordinating disaster management in the State. It has 27 staff drawn from various MDAs with only one Plan (Emergency Preparedness and Response Plan of 2017) and limited financial resources. The level of preparedness for flood disaster is low. The Institution does not have equipment for search and rescue operation and lacks trained personnel for emergency response. The State does not have an Early Warning System and therefore not able to warn households ahead of an impending flood disaster. Kaduna State has an Institution for disaster risks management called Kaduna SEMA. It was established in 2003 by an Act of the Kaduna State House of Assembly. It is the focal point for disaster management in the State. It coordinates disaster management in collaboration with a wide range of Stakeholders. It has a governing Board chaired by the Deputy Governor of the State and has four departments headed by Directors. The State has two Plans for disaster management. These are Kaduna State of Nigeria Emergency Contingency Plan; and Kaduna State Sector Implementation Plan (SIP) 2017 – 2019. It operates a budget of about 300 million naira per annum and has a staff strength of 202 with the State Fire Service integrated into the State SEMA. Flood hazard occurs yearly in recent times; usually from August to September. It is usually caused by high intensity rainfall, poor drainage, blocked drainage as well as flood water from river Kaduna onto adjacent communities. Each flood episode often results in loss of lives, properties, business places and infrastructure. Unfortunately, the State does not have an Early Warning System for flood disaster management. Traditional methods of EWS do not exist in the State. Plateau State has an Emergency Management Agency (Plateau SEMA), It was established by an Act of the State House of Assembly in 2012. All the finances required for DRM in Plateau State comes from the State government. The amount of money budgeted and released to PSEMA varies from year to year. For example, in 2017, 100 million naira was budgeted for DRM in the State. However, less than 30 million naira was available to PSEMA. PSEMA has only two (2) permanent staff since its inception in 2012. Ten (10) staff in the various departments were moved from MDAs on temporal basis. There is a continuous movement of staff in and out of PSEMA. No staff is employed by PSEMA. This situation is compounded by the embargo on employment by the State government for the past twelve (12) years. According to the Executive Secretary of PSEMA, the Agency does not have any facility / Equipment to conduct DRM activities. Flood incidents are yearly phenomena in the State and usually occur in the months of August and September. They are caused by the interplay between intensive rainfall and a set of unwholesome land use practices, such as, poor drainage, blockage of drainage by domestic wastes, building across water ways and settlements on banks of rivers. Each episode of flooding usually results in damage to houses, business premises, farmland and loss of properties and livelihood. The State does not have any form of EWS.

Recommendation

Based on the general observations of this survey, it is recommended that:

- i. The State SEMAs should be strengthened by State governments through Staff recruitment, human capacity development and increased funding in order to make them more responsive to flood disaster incidents
- ii. There should be concerted efforts by relevant stakeholders to develop robust Early Warning System for flood hazard in all the three States. This will facilitate collation and dissemination of all information related to the possibility of flooding in these States
- iii. Communities' preparedness and response capacities should be strengthened by relevant Stakeholders to boost their resilience to flood disaster. This could be done through establishing State Disaster Mitigation and Management Platforms (DMMP) at the State level and Community Disaster Mitigation and Management Platforms at the Community level. These Platforms could be used in developing human and material capacities for preparedness and response to flood disaster.
- iv. There is an urgent need for public enlightenment by relevant stakeholders at household level on the adverse effects of dumping domestic wastes into public drains, building across water ways and developing settlements on the banks of rivers. People need to be told that these attitudes are the direct causes of flood hazard and attitude change is necessary.
- v. Resettling communities that are located on river banks into safe areas may be a long-term solution to this perennial problem. This should be the responsibility of all Stakeholders.
- vi. Dredging of river Benue by the Federal Government can reduce river flooding incidents in Benue State. Siltation of the river has considerably reduced its depth and thus not able to retain incident surface flow within its valley.

1.0 Introduction

1.1 Introduction

Hazards are integral parts of all human societies. They could be natural or man-induced. According to UNISDR (2009), Hazard is a dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage. Examples of natural hazard include Flood, Landslide, Earthquake, Hurricane, Heat wave, Epidemic, etc. Some examples of Man-induced hazards include Political or Religious Crisis, Fire, Oil spill, Acid rain, etc.

When a society is properly organized, the impact of these hazards on communities will be minimal. Such a society is resilient to the shocks imposed by the hazard. However, if a society lacks basic and fundamental organization, it becomes vulnerable to the vagaries of hazards. Vulnerability is the characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard. There are many aspects of vulnerability, arising from various physical, social, economic, and environmental factors. Examples may include poor design and construction of buildings, inadequate protection of assets, lack of public information and awareness, limited official recognition of risks and preparedness measures, and disregard for wise environmental management (UNISDR, 2009).

The resilience of a society to hazard impact is often described as the shock absorber which the society uses to nullify the effects of the shocks imposed on the society by the hazard. This shock absorber is technically referred to as Capacity. Capacity is the totality of assets and resources which a society possesses for fighting hazard impact. The higher the Capacity of a society, the less vulnerable it is. The reverse is also true. Preparedness and adequate Response mechanism are integral parts of Capacity. Preparedness, according to UNISDR (2009) is the knowledge and capacities developed by governments, professional response and recovery organizations, communities and individuals to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current hazard events or conditions. Capacity also includes the availability of Early Warning System (EWS) within the society. EWS has the potential of reducing disasters to its barest minimum. It literally warns people in the community of an impending danger and if people heed such warnings, lives and properties can be put out of harm's way. According to UNISDR (2009) EWS is the set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities and organizations threatened by a hazard to prepare and to act appropriately and in sufficient time to reduce the possibility of harm or loss. This definition encompasses the range of factors necessary to achieve effective responses to warnings. A people-centered early warning system necessarily comprises four key elements: knowledge of the risks; monitoring, analysis and forecasting of the hazards; communication or dissemination of alerts and warnings; and local capabilities to respond to the warnings received. The expression "end-to-end warning system" is also used to emphasize that warning systems need to span all steps from hazard detection through to community response.

If the capacity of a society is high and vulnerability is low, disaster risks will be very low and rare. This is the ultimate for an organized society. This is the level every society aspires to attain. It is possible to get to this level if there is conscious effort by the society to increase its Capacity and reduce its vulnerability. This is one of the cardinal objectives of this project. This project envisages that if Early Warning and Early Response can be

improved in the Middle Belt of Nigeria, these will go a long way in strengthening preparedness for flood disaster in this region. In other words, Flood disaster in this Region can be reduced significantly if concerted efforts are made by all relevant stakeholders to strengthen Early Warning Systems, Preparedness and Response capacities at State, Community and Households levels.

1.2 Objectives of the Survey

The specific objectives of the survey are to:

1. Carry out an analysis of past and current disasters and its effects on the communities and structures - historical timeline, frequency, seasonality, intensity and duration, impact on lives and livelihoods of the people, existing response structures and capacities
2. Comprehensive mapping of institutional framework and policies in place for natural disaster management in place.
3. Map existing Early Warning Systems in place, its functionality and effectiveness in all three states and analysis of how the EWS is linked to national level EWS structures
4. Identify and review in each State, existing disaster management structures viz-a-viz coordination, capacity, response, strength, weaknesses and opportunities available and links with national structures and mechanisms.
5. Provide clear recommendation on establishing/ strengthening a community based early warning system specific to flooding – EWS design - operational structure, resource requirements and capacity building needs at different levels.
6. Establish base line figures for indicators in the project log frame.
7. Identify potentials, approaches, supports and techniques for specific disaster risk reduction, mitigation and management across the communities, LGAs and States and formulate clear recommendations.
8. Develop the methodology and tools required for undertaking this study finalized based on the feedback from CA and pre-testing of tools.

1.3 Scope of Survey

The scope of study is restricted to the middle belt of Nigeria. Specifically, the study focused on the three pilot states of Benue, Kaduna and Plateau. The Project was designed to cover three LGAs in each of these States and nine Communities in each LGA. This makes a total of nine LGAs and twenty-seven communities in the three States. The details are shown in Appendix 1

The study is focusing on flood hazard only. It is essentially concerned with evaluating the Institutional framework for Disaster Risk Mitigation in these States, as well as assessing the status of EWS, coordination mechanism, Preparedness and Response capacities. The baseline survey covers the period of March 1st, 2018 to July 30th, 2018.

2. 0 The Middle Belt Region of Nigeria

2.1 Location, Climate, Vegetation and Soils

The Middle Belt of Nigeria is located in Central Nigeria, approximately between latitudes 8 and 10 degrees north of the Equator. Within this belt, three States are being considered in this present Survey. These are Benue, Kaduna and Plateau States (See Cover Page).

These States are located within the Tropical wet and dry climate characterized by mean annual temperature of about 27 degrees Celsius and marked by strong seasonality in rainfall. Rainy season starts effectively in the month of May and ends in the month of October. Dry season lasts from November to April. Annual rainfall within these three States ranges between 1500 and 2000 mm. About 80% of the annual rainfall is concentrated in the months of July, August and September. This is one of the major causes of flooding in these States.

The Middle Belt Region of Nigeria is located in a tropical grassland ecosystem, commonly called Savanna. These three States are located in the Guinea Savanna section with tall grasses and short trees. The soils are essentially the Tropical Ferruginous type with low organic matter content and shallow soil profile.

2.2 Relief and Drainage

These three States have varied relief characteristics. This ranges from the rugged terrain in Plateau State to the Plains of Kaduna State and the Valley terrain of Benue State. Plateau State is usually referred to as the hydrological centre of Nigeria, because, almost all the rivers in northern Nigeria derive their sources from the hilly terrain of Jos Plateau.

In Benue State, river Benue is the dominant river and occasionally overflows its banks. When this happens, communities located close to the banks of the river are inundated. Makurdi town is an example. In Kaduna State, river Kaduna is the dominant river and occasionally floods some adjacent communities such as, Malali, Barnawa, Ungwa Rimi, etc. The major rivers in Plateau State include rivers Dilimi, Wase, Kalong, etc. Some of these rivers also overflow their banks periodically and cause flooding in adjacent communities. An example is the river Kalong in Shendam LGA of the State.

2.3 Population and Human Activities

The population figures for the three States, as at 2018, are: Benue (6.34 million), Kaduna State (8.35 million) and Plateau (5.43 million). These populations are heterogeneous and multi-lingual in character. Farming is the dominant livelihood of the people, particularly those living in rural areas. People living in the urban areas of these States, however, are engaged in Civil Service jobs, trading and in the Private sector. Fishing is also common in the riverine areas of these States.

2.4 Hazard Profile

The common Hazards in these three States are: Flood, Fire, Strong winds, Epidemics, Road Accidents and Crises. Besides the occasional religious and political crises as well as the Herdsmen and Farmers clashes, Flooding is the most prevalent natural disaster in these States. It is a perennial event and it is usually destructive.

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: Findings from a qualitative research

Flood disasters are not restricted to these States alone. It is a national phenomenon. Data available at the EMDAT (2012), for example, shows that out of the 10 most severe disasters between 1980 and 2010, nine were floods with only one being drought of 1983. The report shows that the 1988 flood affected 300,000 people. In the subsequent years, the following numbers of people were affected: 1994 (580,000); 1998 (100,000); 1999 (90,000); 2001 (84,065); 2003 (210,000); 2007 (50,000); 2009 (150,000); 2010 (1,500,200).

During the nation-wide flood disaster that occurred in Nigeria in 2012, according to the National Emergency Management Agency (NEMA), 363 people were killed, 5,851 were injured, 3,891,314 were affected, and 387,153 people displaced due to the resulting floods.

Benue, Kaduna and Plateau states located in the middle belt of Nigeria are perennially impacted by flood hazard with attendant adverse consequences. The 2012 flood disaster in Nigeria, for example, shows that eight out of the seventeen LGAs in Benue State were affected. 123,316 people were affected in these LGAs in 17,617 households (FGN, 2013)

In Benue state, the damage and losses caused by the 2012 flood disaster according to FGN (2013), was estimated to be about 40, 000 million naira. It was observed that 1,512,610 working days were lost in crop production; 680 million naira lost by workers in crop production; 294,816 working days lost in fisheries; about 73.7 million naira lost by workers in fisheries, giving a total of 754 million naira lost by workers in the Agricultural Sector. The report also shows that about 557 million naira was lost in the micro- trade sector. The impact on employment and income in the manufacturing sector, for example, shows that 63,228 total working days were lost by microenterprise owners and 316,440 total working days were lost by microenterprise workers. This translated to a total income loss of 105.4-million-naira microenterprise owners and 210.4-million-naira income loss by microenterprise workers. It was also noted that damage and losses in the health sector amounted to staggering 314.4 million naira.

These disaster effects are overwhelming because the Nation lacks Early Warning System (EWS). A robust EWS has the potential of preventing or mitigating the adverse effects of this flood disaster.

FGN (2013), reporting on the status of Early Warning System in Nigeria, noted that no systematic and automated process for developing and disseminating early warning information has been established to date. Multiple agencies are making piecemeal efforts at trying to set up early warning systems. The Nigerian Meteorological Agency (NIMET) provides weather forecasts and seasonal rainfall predictions. The forecasts are based on soil moisture and historical data, which informs early warning alerts for climate-related disaster threats across the country. Information management of existing risks and data is not distributed proactively as monitoring and early warning information to national disaster risk and emergency management stakeholders.

While NEMA has engaged in establishing an early warning system for epidemics, including the institutionalization of the National Influenza Sentinel Surveillance, there is no effective national early warning system in place for floods, either at the federal, state, or local/community levels. Most rivers in the country do not have functional water level gauges, while rivers that have stage and discharge stations are not coordinated into an integrated system. The status of hydrometeorology data collection and monitoring for flood warnings is inadequate in most river basins in Nigeria. Hence, overall, the national Early Warning System on floods is not systematic and there are no clear standard operating procedures in relation to the dissemination of alerts and how these alerts reach

those communities most at risk. Generally, states and local governments have been slow or even reluctant to engage in early warning activities due to limited awareness, an absence of political will, and resource constraints.

3.0 Methodology

3.1 Types of Data Collected

To achieve the stated objectives of the survey, the following types of data were collected:

- a. Relevant secondary data on flood incidences, flood effects on the communities as well as Disaster Management structures in the target States.
- b. Baseline data on disaster management structures in the three states, the status of Early Warning System, as well as available capacities for Preparedness and Response to flood incidents.

3.2 Techniques of Data Collection

Data collection was achieved through a multi-layer data collection approach:

- a. National Stakeholders Workshop on Disaster Management at the Federal level held in Abuja. This meeting assisted the consultant to solicit responses from participants on the various aspects of disaster management, with reference to Disaster management structure, EWS, and Capacities for Preparedness and Response to flood disasters. A set of structured questionnaires were used in the workshop (Appendix 1).
- b. State level Stakeholders workshops held in Benue, Kaduna and Plateau States. These workshops enabled the Consultant in obtaining necessary data from the large audiences around the issues of disaster management structure in each state, current status of EWS in each State as well as available capacities for Preparedness and Responses to flood disaster. A set of structured questionnaires were used in the workshop (Appendix 2). At the State level, some Key Stakeholders were also engaged in an interview to obtain detailed information on all issues concerning flooding in each State. Key Informant Interview (KII) Guide was used for this purpose (Appendix 4). The list of Officers that were interviewed during the KII sessions is displayed in Appendix 5.
- c. Community level data collection. According to the Work Plan, some Communities were selected in each State for Focused Group Discussion. This was meant to solicit relevant information from the participants concerning all the issues of flooding as it affects their Communities. An FGD Interview Guide was used for this exercise (Appendix 6) At Community level, the Participatory Vulnerability and Capacity Assessment (PVCA) technique was also used in obtaining vital information from the participants on some issues of flooding in their Communities.
- d. Household level data collection. A set of questionnaires was developed to solicit responses from households on several issues concerning their perception of causes and effects of flood hazards, access to Early Warning System, nature of preparedness for flood hazard incidence and capacity for response to flood disasters (Appendix 3). This questionnaire was uploaded onto the Kobo Collect Platform and accessed through Samsung J7 mobile phone. Field Enumerators were trained on how to use the Kobo Collect technology for collecting field data. The technology was pre-tested in one of the communities (Wadata, Makurdi LGA, Benue State).

All assessment instruments were tested for validated and reliability before use.

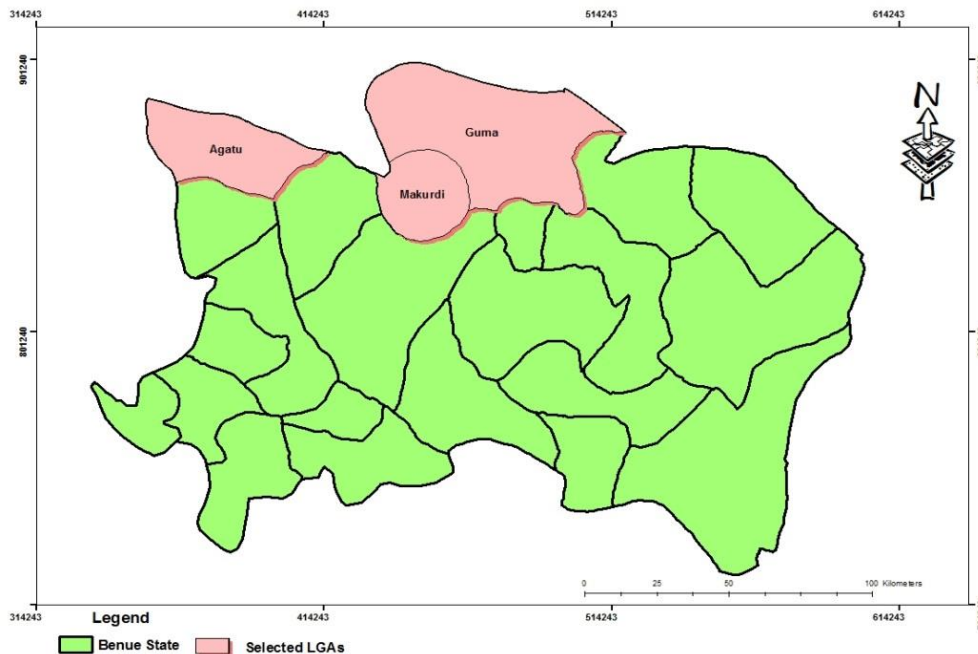
3.3 Techniques of Data Analysis

The Kobo Collect technology has a built-in Microsoft Excel statistical tool which supported simple descriptive statistics of the data obtained at the Household level. In addition to this the SPSS statistical analytical tool was coupled to the Microsoft Excel to enable the computation of some inferential statistics.

4.0 Benue State

The survey in Benue State was done at three levels: State, Community and Household levels, using the various assessment instruments described in chapter three.

Figure 1: Map of Benue State showing survey LGAs



4.1 State Level Assessment

4.1.1 Legal and Institutional Framework for DR

The Institution established by the State Government for Disaster Risk Management (DRM) is the State Emergency Management Agency (SEMA), hereafter referred to as Benue SEMA. It was established by the State House of Assembly Act of 2006, passed into law and signed by the then Executive Governor. The mandate of the Agency includes:

- a. Coordination of disaster management in Benue State;
- b. Rehabilitation of disaster victims in Camps;
- c. Provision of Humanitarian Relief materials to displaced victims;
- d. Liaising with NEMA for assistants to disaster victims.

Benue SEMA is the focal point for DRM in the State. It works in collaboration with a wide range of stakeholders which include: State ministries of health, Information, Water Resources and Environment, Urban Development Board, Red Cross, Police, CBOs, UNCHR, UNOCHA, Women Affairs, UNICEF and BENGONET. Stakeholder's meeting is supposed to be held regularly to review issues related to disasters, but this hardly hold in a whole year.

4.1.2 Policies and Plans in Benue State

Benue State does not have a Policy document on DRM. The State has a DRM Plan known as the Emergency Preparedness and Response Plan, 2017. The plan highlights programs / Activities that should be done before and during a disaster incident, as well as identifying who does what and the expected budget for each Activity.

4.1.3 Budget for DRM

Funding of DRM in the State comes from the State government. It is usually small and irregular. In view of this challenge, all the Local Government Councils were mandated to donate N100, 000 of their monthly budgets to Benue SEMA for DRM activities. This money gets to the State Treasury, but never gets to Benue SEMA. Because of this, the agency is not able to carry out its mandate effectively.

4.1.4 Personnel for DRM Activities

Benue SEMA has only 27 staff members. Virtually all of them are drawn from one MDA or the other. There is no permanent staff in SEMA. This arrangement does not allow for proper growth in the knowledge of DRM among these staff. Efficiency is therefore compromised.

4.1.5 Facilities / Equipment for DRM

According to the consensus of the stakeholders at the Benue Stakeholder's meeting in Makurdi, Benue SEMA does not have any Equipment for effective DRM activities. However, Benue SEMA has:

- i. A store for emergency relief materials;
- ii. Eight (8) IDP Camps located in Logo, Guma and Makurdi LGAs jointly managed with NEMA;

4.1.6 Flood Hazard Profile

Flood hazard profile for the State was developed from responses obtained from a wide range of Stakeholders at the State Stakeholders Workshop held on 18 & 19th June 2018. Some of the information was also derived from Key Informant Interview as well as responses from Communities during Focused Group Discussion and interviews at Household levels.

4.1.7 Locations of damaging floods

The locations of the communities with damaging recurring floods in the State are:

Table 1: Communities that experience damaging flood

Communities with flood occurrences		
MAKURDI LGA	GUMA LGA	AGATU LGA
Gyado Villa, Achusa, Welfare Qtrs, Idye Village, Wurukum Market area, Wadata Rice Mill, Kucha Utebe, Adeke, Agbough Village, Iniogun, Modern Market Side, Agber village	Asangeabar, Gbajimba, Iye, Imande, Yogbo, Tse-Orkpen, Torkpande, Tse-Taavan, Tse-Kese, Saghev, Kaambe,	Okokolo, Ocholonya, Abugbe, Utugolugwu, Adana, Oweto, Ikpele, Ebete, Ogbai, Obishu, Ohelefu, Okpanchenyi, Ayele, Aila, Egba, Ogwule, Usha, Ogan, Ogwufa, Obu

4.1.8 Characteristics of the flood hazard

Some other attributes of the flood hazard are listed in table below

Table 2: Characteristics of the flood hazard

Flood Attribute:	Description
Frequency of Occurrence:	Occurs yearly in recent years
Seasonality:	Usually from August, September and October
Causes:	Overflow of River Benue onto adjacent communities, Lack of proper Urban Planning, and Dumping of refuse into drainages, Intense rainfall, Poor drainage, Blocked drainage, Building across water ways.
Magnitude:	Affects over one hundred people each year
Effects:	Usually affects Houses, Properties, Farmlands, Livestock, Business Places, Infrastructures and Diseases.

4.1.9 Preparedness for disaster incidents

Benue SEMA has:

- i. Four (4) ware houses for food and non-food items;
- ii. EPR Team, in collaboration with other stakeholders;
- iii. There is an EPR Plan to guide Preparedness and Response;
- iv. State Ministry of Information and Orientation provides periodic sensitization campaign on flood disaster issues.

However, the state lacks some essential items for Preparedness. These include:

- i. Specialized equipment for flood disaster;
- ii. Equipment for search & rescue services;
- iii. IEC materials for local communication;
- iv. SOP for SEMA activities; and
- v. Emergency toll-free number

4.1.10 Early Warning System

The importance of Early Warning System (EWS) in disaster Risk Management cannot be over emphasized. EWS has the potential of cutting down damage and losses resulting from a disaster incident to its barest minimum. It is therefore desirable that a robust EWS is developed and deployed to all vulnerable communities.

In this survey, the question was asked about the status of the EWS in the state for flood hazard management. Responses from all stakeholders indicate that there is no EWS for flood hazard management. They, however, stated that the periodic rainfall and flood predictions by NIMET and NIHSA respectively are promptly communicated to vulnerable communities. The consensus is that the State does not generate EWS.

4.1.11 Response Mechanism

The key emphases in Response to disasters in the State are:

- i. Swift evacuation of victims to IDP Camps;
- ii. Providing humanitarian assistance;
- iii. Timely action by the Response Team;
- iv. Activities are guided by the EPR 2017 document.

However, the State does not have:

- i. Search and Rescue equipment;
- ii. Enough staff to cover extensive areas.

4.1.12 Challenges

Key challenges include:

- i. Inadequate funding;

- ii. Inadequate staff;
- iii. Lack of specialized equipment for search and rescue;
- iv. Dredging of River Benue. The river has become too shallow to accommodate all the flow in the river.

4.1.13 Suggestions / Way forward

- i. Human capacity building;
- ii. Support from organization for effective DRM;
- iii. Installation of EWS for flood management in the state

4.2 Community Level Assessment

Assessment at the Community level was conducted mainly through the instruments of:

- i. Focused Group Discussion (FGD); and
- ii. Participatory Vulnerability and Capacity Assessment (PVCA).

FGD was conducted in two communities in the state: Nzorov and Achusa Communities, while the PVCA was conducted in Gyado Villa. Five tools were used for the PVCA. These are: Problem Tree, Seasonal Calendar, Historical Time line, Venn Diagram and Community Mapping (see appendix 4). Two FGDs were conducted: one for men and the other for women. By and large there were consensus of opinion among these two demographic groups with reference to all the issues raised concerning flood hazard in the community. The outcomes of these investigations were integrated into a single report and are presented as follows.

4.2.1 Causes, Frequency and Effects of Flooding

In Nzorov community, the predominant cause of flooding is the overflow from River Benue. This is usually supplemented by overflows from rivers Guma and Mu. The community is enclosed on three sides of these rivers. This phenomenon occurs mainly in the months of August and September. It is usually a yearly event.

In Achusa community (Lat. 7 41', Long. 8 31'), the major cause of flooding in the community is lack of drainage. A new road connecting the Mobile Police Barrack and Welfare Quarters was constructed without gutters literally created a dam which stores all the rainfall on the side of the community. Anytime there is high intensity rainfall, the community is inundated. This occurs every year.

In Gyado Villa community (Lat. 8 59', Long. 7 20'), it is a combination of urban flooding and occasional overflow of river Benue into the community.

Whenever flooding occurs in these communities, houses collapse, some household furniture is damaged, crops are destroyed, livestock are lost, fish farms are washed away, and, in some instances, lives are lost. Sometimes diseases result from the flood incidence and businesses are disrupted.

4.2.2 Mitigation Measures by Communities

Currently, these communities are not doing anything about the recurring flood hazard. The Federal Government (FG) promised to dredge river Benue, but nothing has been done so far. The belief among community members is that they do not have required financial and human resources to solve this problem. Thus, any time the flood comes; they move to higher ground and return when the flood water recedes. Occasionally, the communities help

themselves by clearing some of the nearby streams and gutters so as to facilitate easy evacuation of flood water out of the community.

4.2.3 Availability of Early Warning System

There is no formal Early Warning System (EWS) in any of the communities. However, some Fishermen are known to notice periods when river Benue increases in volume, and Leaves start floating on the river which they interpret as flood time. This information is not usually communicated to the community for possible action. It is usually friends and relations of those fishermen that get this information.

Occasionally, Radio Benue announces rainfall prediction by Ministry of Water Resources and Environment, but this is not usually taken seriously by residents of the community. This is because, in the past such messages turned out to be untrue.

4.2.4 Preparedness for Flood

The Communities do not have any store for emergency medicine or emergency relief materials. They also do not have emergency shelter for use by flood disaster victims. There is nobody in the community that has any formal training in DRM.

4.2.5 Response Mechanism for Flood Disaster

Whenever, flood occurs in the community, the affected people move to friends and relations houses as a temporal measure before the flood recedes. The communities do not receive any external assistance when flood incident occurs in the community. They do not have any Rescue Team or Equipment. Occasionally, government officials come to some communities to evacuate them to an IDP Camp known as the International Market, but without any provision. NGOs, Churches and Philanthropists are more frequent in their support to the community. In 2017, for example, the Governor's wife and some Christian groups supplied them with some none food items and food. Response time is usually after a week of the incident. Help usually comes late, if it ever comes.

4.2.6 Challenges hampering flood hazard mitigation

These include the following:

- i. Lack of funds to embark on simple mitigation measures;
- ii. Increasing population of the community as a result of influx from crisis areas;
- iii. The dredging of River Benue is beyond the ability of the community.
- iv. Block drainages and lack of drainages in some areas.

4.2.7 Needs of the communities

- i. Resettlement;
- ii. Introduce irrigation agriculture so that people can move away from the river banks and flood plains;
- iii. Enlightenment on habit / attitude change, particularly those related to settlements on flood plains;
- iv. Construction of drainages as well as clearing of blocked drainages

4.3 Household Level Assessment

The nature of flood hazard, its effect as well as its management at household level were also assessed in this study. The responses are similar to the responses at the State and Community levels. To avoid undue repetitions,

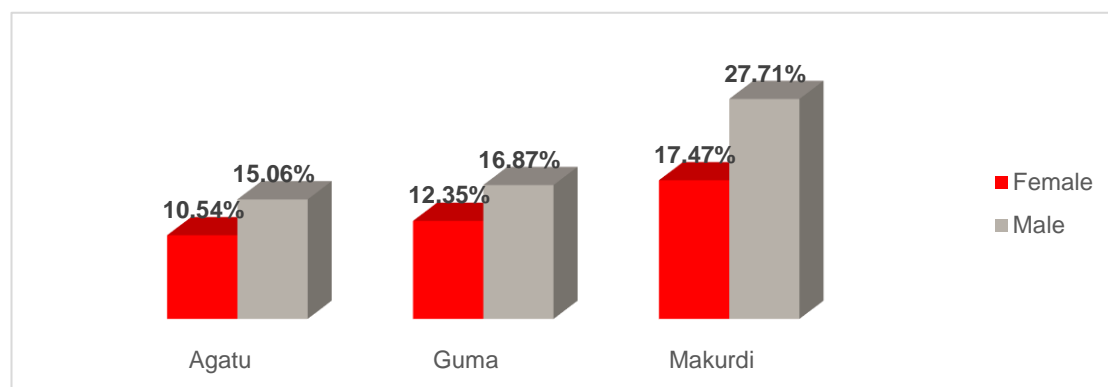
therefore, some of the responses given at this level were dropped from this report. The following are some of the observations for Benue State. Three LGAs were covered in this survey. These are Agatu, Guma and Makurdi.

4.3.1 Demographic Composition of Respondents

About 25% of the respondents are from Agatu LGA, while 29% and 45% are from Guma and Makurdi LGAs respectively (fig 2). There is an equal representation of both genders in the survey. This implies that views from both males and females were well represented.

In all cases, however, males were more than females. This may be due to cultural peculiarity of the State.

Figure 2: Gender of respondents in Benue State

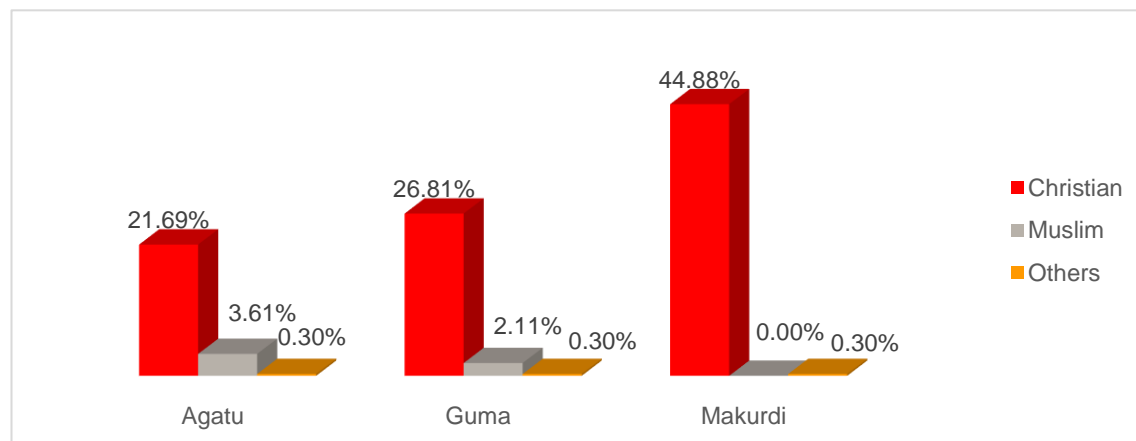


Religion

Information on religion of the people is needed so that humanitarian assistance can be appropriate in the event of disaster. In addition, this information will enable disaster managers obey religious laws in times of emergency.

In this survey, over 90% of the respondents are Christians, while Muslims make up about 6% of the respondents. Thus, in delivering relief materials to flood disaster victims, this fact should be borne in mind. Disaster managers should also be aware that different customary laws exist in these LGAs.

Figure 3: Religion of respondents in Benue State

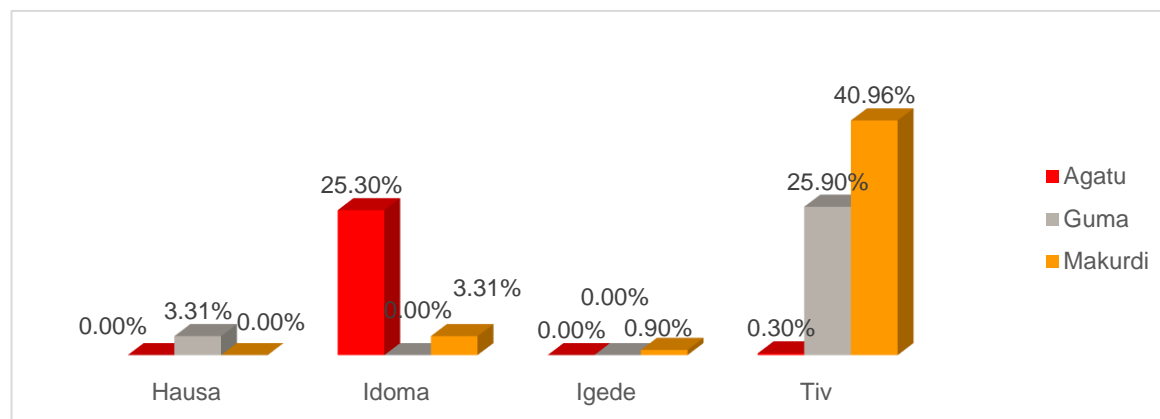


Major languages spoken in the state

The issue of language is important for disaster managers to know the best language in which to communicate messages related to flood hazard risks to the people in this survey, it was revealed that Tiv and Idoma are the

major languages spoken in these LGAs. Hausa is spoken by a small proportion of the people. About 65% of the respondents speak Tiv across the three LGAs while, about 30% speak Idoma (fig. 4)

Figure 4: Major languages spoken in Benue State



Level of disability in the state

An assessment of the level and types of disabilities in a community gives disaster managers requisite information on types of humanitarian relief material to take to victims in times of emergency. Besides, it also informs disaster managers on issues related to communication methods to deploy in times of emergency. It also informs preparedness and response operations.

In this survey, over 90% of the respondents indicated that they do not have any form of disability. Only a small proportion of the population agrees that they have problems with walking, hearing and seeing.

Level of educational attainment

The higher the educational attainment of an individual, the lower is his / her vulnerability to disasters. Illiteracy and ignorance are key issues of social vulnerability. In this study area, about 70% of the respondents have Secondary School and Tertiary Education Certificates (table 3). This enables the population to communicate in English language, appreciate environmental issues and have capacity to be trained in disaster management

Levels of Secondary and Tertiary education are relatively higher in Makurdi LGA than in other LGAs. This is because Makurdi LGA is predominantly an urban area with a larger number of academic institutions.

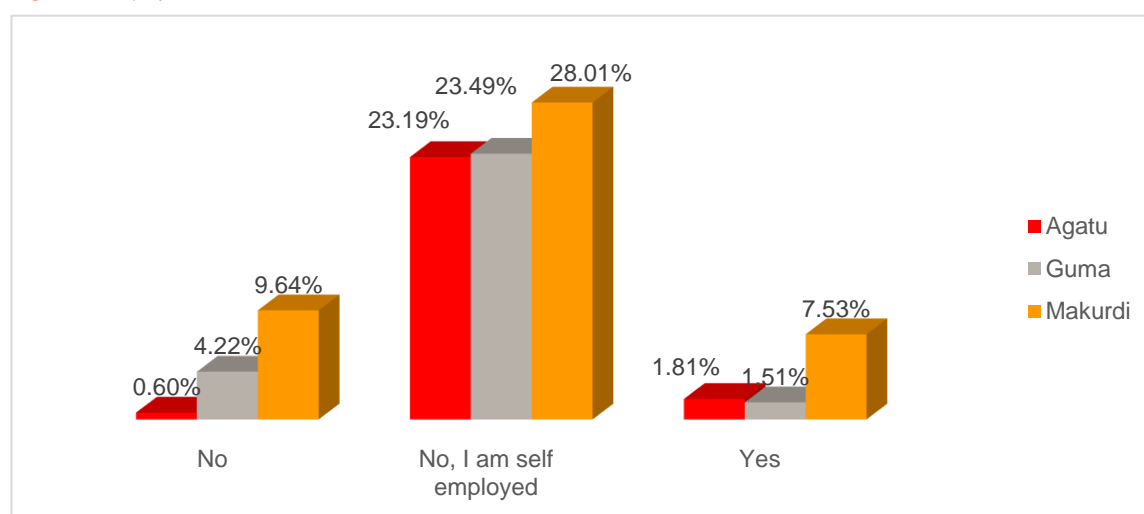
Table 3: Level of Educational Attainment

Count of start	Column Labels			
Row Labels	Agatu	Guma	Makurdi	Grand Total
Informal Education	0.00%	0.60%	0.60%	1.20%
No formal Education	7.23%	7.23%	1.81%	16.27%
Primary School Certificate	5.42%	6.93%	5.42%	17.77%
Secondary School Certificate	9.64%	10.24%	16.27%	36.14%
Tertiary	3.31%	4.22%	21.08%	28.61%
Grand Total	25.60%	29.22%	45.18%	100.00%

Status of Employment

Status and types of employment are major indices of economic vulnerability. Unemployed people are more vulnerable to disasters than employed people. Unemployed people tend towards poverty which leads to accumulation of risks and ultimately higher vulnerability. The higher the vulnerability, the higher is the disaster risk. In this survey, only about 15% are unemployed (fig.5). 85% are employed by themselves or various other organizations. Out of these, 75% are self-employed while about 10% are engaged by other organizations. This implies that the people have some form of capacity to remain resilient against the impact of flood disaster. Their income will enable them to evolve strategies for combating physical, social, economic and environmental vulnerabilities. They will be less dependent on external aid in the event of a disaster.

Figure 5: Employment Status in Benue State



Type of Employment

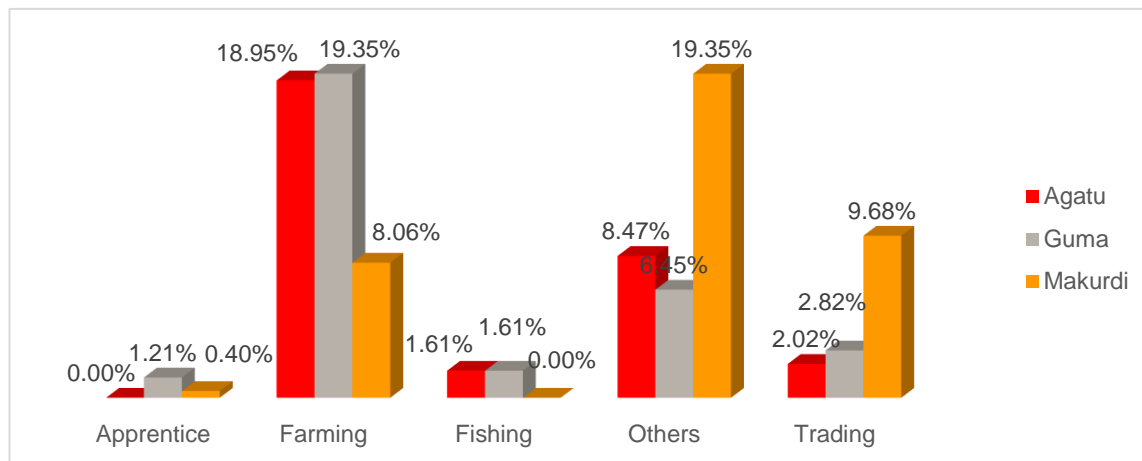
The issue of employment was explored further in order to know which organizations are engaging the 10% of the population who are employed by Organizations. The investigation shows that the majority of them are working in Civil Service jobs, with more in Makurdi LGA because of the status of Makurdi as a state capital. Out of the few engaged in other organizations, majority of them are also in Makurdi LGA, again because of the opportunities provided by Makurdi as a state capital (Fig. 6).

Household's means of livelihood

Livelihood types are highly varied in the state. Fig 6 shows that people are engaged in apprenticeship, Farming, Fishing, trading and other vocations. Farming is the most dominant forms of livelihood in the State. Agatu and Guma LGAs have the highest numbers of this livelihood. However, Makurdi LGA has more of trading and other miscellaneous forms of livelihood, apparently due to its urban character.

This information is important because, in the event of a disaster, it will be easy to imagine which sector of the economy incurred the most damage and losses. This will also inform recovery planning.

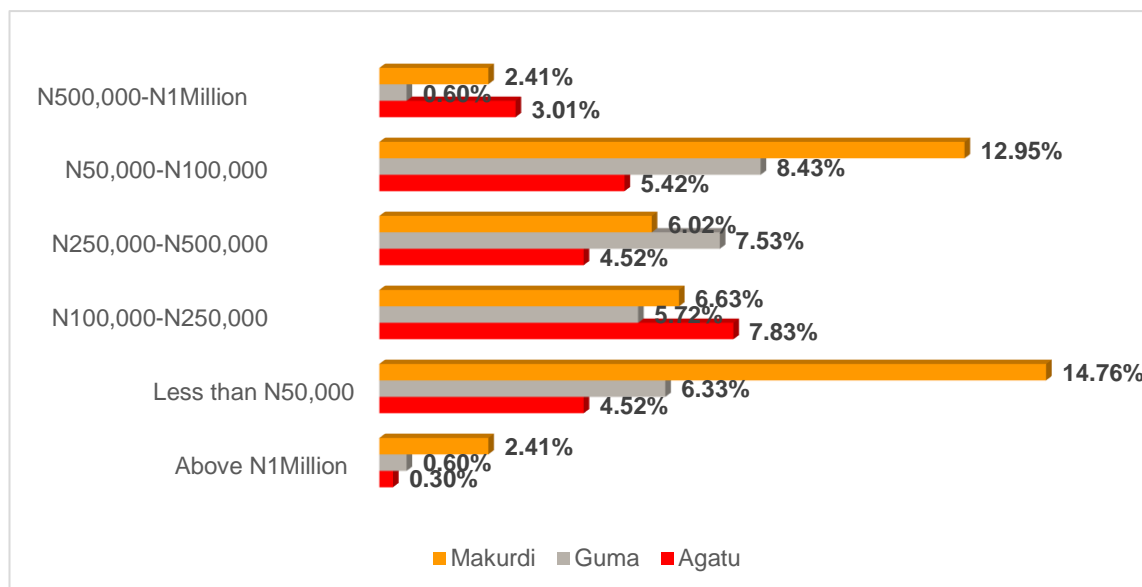
Figure 6: Household Livelihood



Household Annual Income

There is a wide range in annual income earned by residents of the State. Majority of the people are in the N100,000 – N250,000 bracket (27%). Makurdi LGA is leading other LGAs in the number of people within this category, apparently due to its status as the State capital. Another major category is the less than N50,000 income group. Again, Makurdi LGA is leading in this category. In the group of those earning above N1 million per annum, Makurdi LGA is also leading, apparently due to its urban character.

Figure 7: Household annual income

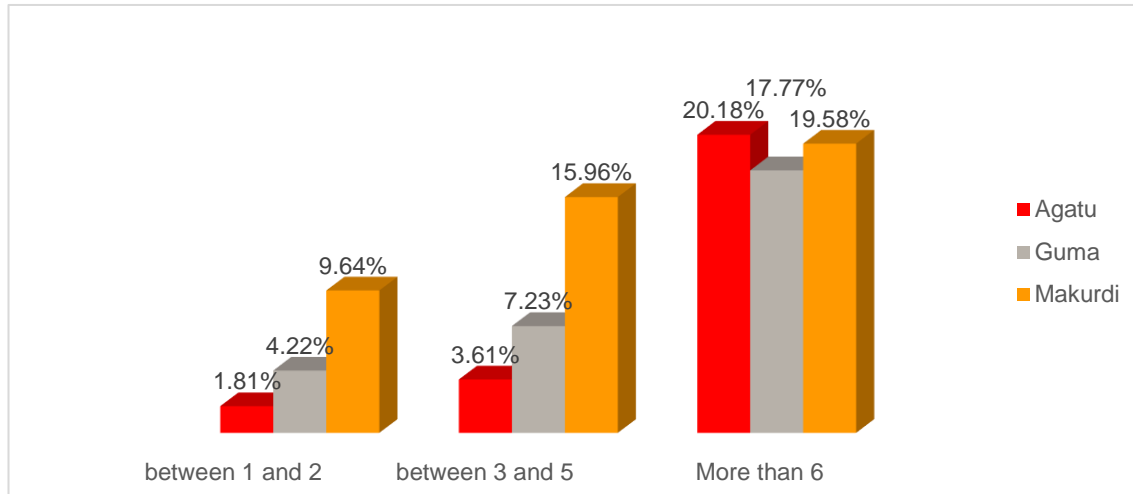


Size of Household

Size of household is related to vulnerability. The higher the number of persons per household, the higher is the vulnerability of the household to disaster risk. This is because; the cost of taking good care of the people will naturally be higher.

In this survey, about 60% of the people have more than six (6) persons per household. This will be a great burden on heads of households and hence higher economic vulnerability. The higher the vulnerability, the higher is disaster risks.

Figure 8: Household size

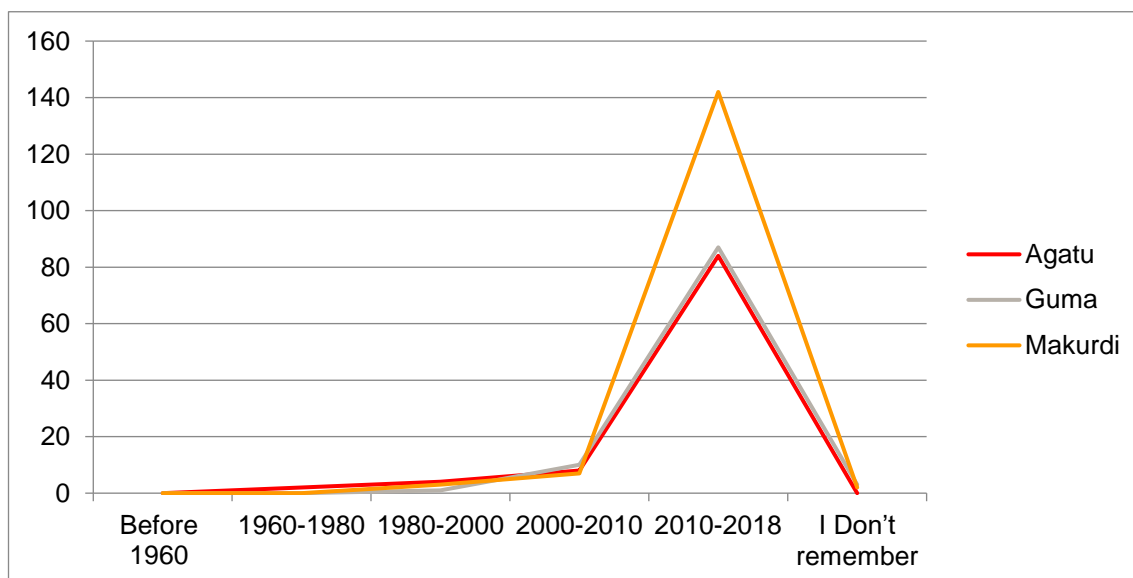


Historical Timeline of Flood Hazard

There is a consensus that flood incidents in Benue State have become more frequent in recent years. Majority of the peoples believe that in the past eight (8) years, flood incidents have become very common (fig.9). This view is more popular with residents in Makurdi LGA

This indicates that the forthcoming years, flooding is going to be a recurring hazard. Consequently, issues around flood disaster preparedness and response should be taken more seriously. There should be more collaboration and partnership among disaster management agencies at the three tiers of government, line MDAs, NGOs and the Community.

Figure 9: Historical timeline of flood hazard in Benue State

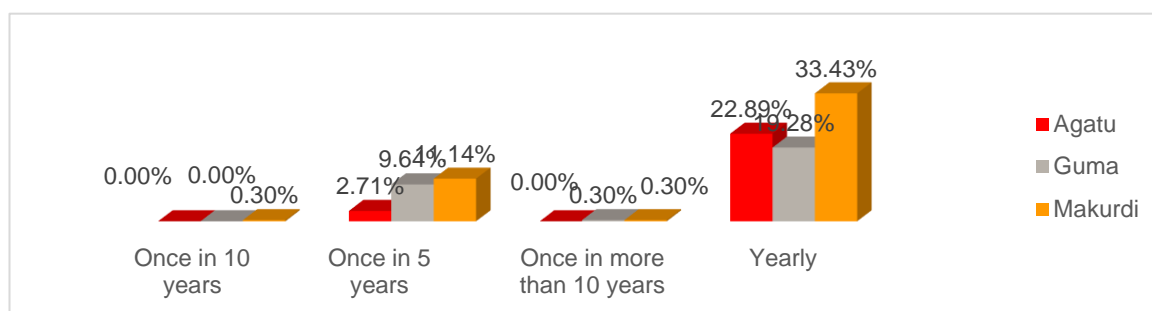


Frequency of Flood Occurrence

Results obtained from this survey indicate that about 75% of the respondents across the three LGAs are of the opinion that flood occurrence is a yearly phenomenon. Another 23% of the respondents agree that flood incidents occur once in 5 years. Overall, the consensus (98%) is that flood incidents occur at least once in five years.

Again, this calls for concerted efforts by disaster managers and all stake holders to be more pro-active in mitigating this hazard. A once-in-five years devastating flood can erode all the social and economic achievements of ten years.

Figure 10: Frequency of flood occurrence



Nature of Properties Affected by Flood Hazard

The nature of properties damaged by flood incidents is usually a reflection of the entire spectrum of human achievements which the flood hazard encounters along its path. When a community is inundated, everything submerged in the water is destroyed. Thus, in this study, the respondents chose all possible options including houses, farmlands, business places, infrastructures, livestock, etc.

The nature of properties damaged, however, depends on the location and economic activities in that location. In the housing sector, Makurdi LGA has the highest number, apparently due to its urban nature. It is interesting to note also that Makurdi LGA has the highest number for all other sectors. Perhaps, this is due to its peri-urban nature.

This piece of information should be useful to disaster managers in computing damage and losses after a flood disaster incident. It will also be useful for assessing Post Disaster Needs of affected Communities.

Flood Effects on Households

At the household level, the types of properties damaged are also reflective of the location of the household, whether in urban area or in rural area. Almost equal numbers of houses are reported to be affected in all three LGAs (table 4). Makurdi LGA, however, reports more effects on household valuables and household properties. Even in crops damaged, Makurdi LGA also reported the greatest effects. This is curious, because as a peri-urban LGA there should be less farming activities.

This observation is also instructive to disaster managers with reference to Damage and Loss Assessment as well as Post Disaster Needs Assessment.

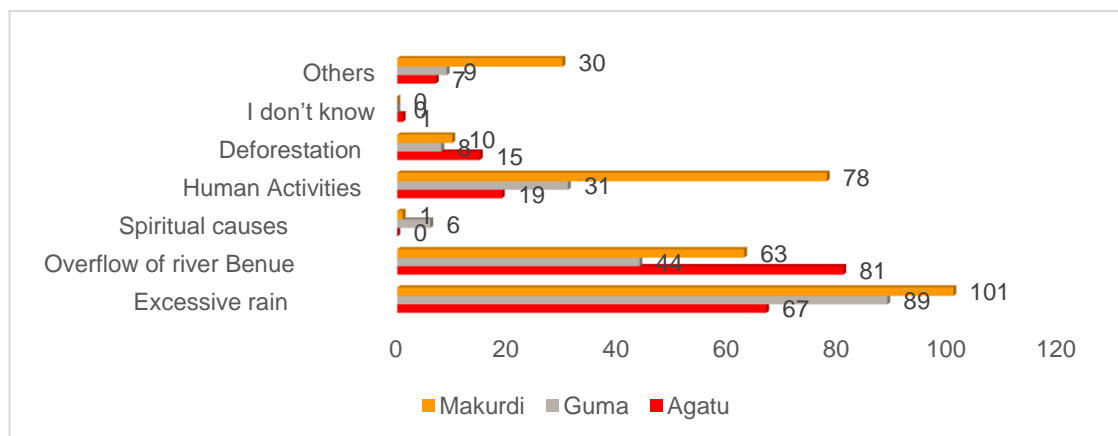
Table 4: Flood effect on household

How was your household affected by the most recent flood						
Lives were lost	Some valuable	Crops damage	Household pro	House damage	Others	Was not affected
0	80	83	75	54	0	0
14	72	87	77	60	4	1
1	129	92	127	56	9	3

Causes of Flood

Responders believe that flooding is caused by a wide range of factors. However, majority of them are of the opinion that flooding in the State is mainly caused by excessive rainfall, human activities and overflow of river Benue (fig.11). Respondents in Makurdi LGA are more affirmative in this regard. These observations are in conformity with theoretical and empirical principles of flood occurrence (Gregory and Walling, 1985). This fact should inform preventive and mitigation measures.

Figure 11: Causes of flood



Dumping of Refuse into Drainage

One of the numerous human activities, implicated in flood occurrence is dumping of refuse in drainages. About 50% of the responders agree that this factor is a major cause of flood disaster in all communities in the three LGAs with Makurdi LGA standing out clearly (Fig. 22). Makurdi LGA agrees and strongly agree with the fact that dumping of refuse is one of the major causes of flooding because, it is a common phenomenon of an urban area. The other two LGAs are predominantly rural in character.

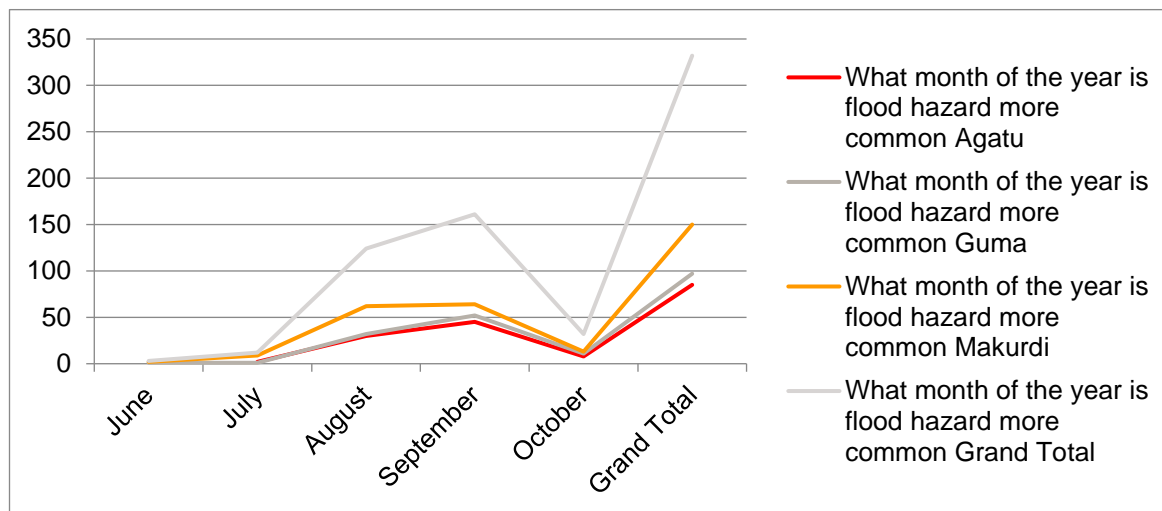
Table 5: Dumping of refuse as a cause of flooding

Count of start	Column Labels			
	Agatu	Guma	Makurdi	Grand Total
2 Disagree	4.52%	4.52%	3.61%	12.65%
5 Strongly agree	3.92%	0.60%	15.96%	20.48%
1 Strongly disagree	4.52%	4.82%	0.90%	10.24%
3 Neutral	2.41%	3.61%	2.71%	8.73%
4 Agree	10.24%	15.66%	21.99%	47.89%
Grand Total	25.60%	29.22%	45.18%	100.00%

Period of Flood Occurrence

Virtually all the respondents (87%) are of the opinion that flood incidents occur in the months of August and September across the State (fig.12). This information is important for flood disaster managers in working out strategies for prevention, mitigation, preparedness and response.

Figure 12: Monthly flood occurrence



Organization providing support during flood disaster

About 73% of the respondents observed that no support comes to them during flood disaster. Only about 8% the respondents agree that some forms of assistance came to their communities during flood disaster. The remaining 19% or so do not seem to know what the issue is all about. This is important information for disaster managers and humanitarian relief providers. The people are feeling abandoned in their times of need.

Distance to river

Only about 17% of the responders agree that their houses are located at an average distance of less than 100 meters to the river. Another 43% agree that they are located about 1km to the river. This shows that most households are located far away from river courses. Thus, most household are not vulnerable to flooding from the river.

Previous training on DRR

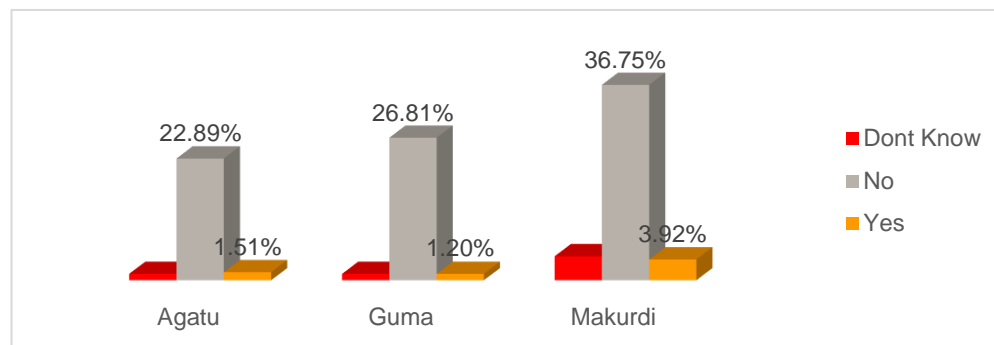
Across the three LGAs covered in this survey, the majority of opinion is that there has not been any form of training on DRR in their communities. Over 96% of the respondents made this observation. This implies that residents in these communities do not know what to do before or after a flood disaster. This condition further increases the vulnerability of the residents to flood disasters. There is, therefore, the need to offer some form of DRR training to these communities in order to reduce their vulnerability to flood incidents.

Community Flood Preparedness Plan (FPP)

Flood preparedness plan enables the community to know what to do before a flood incident, who does what, types of emergency relief materials that are available to victims, location of emergency store, and location of emergency shelter and channels of communication to the community.

In this survey, over 86% of the responders observed that they do not have such plan; while the rest do not know what a preparedness plan is (fig.13). This information should be useful to disaster managers and other stakeholders in organizing workshops for communities on how to prepare emergency plans.

Figure 13: Flood preparedness plan



Community Stock of Emergency Supply

Storage of essential emergency medicine, food and non- food items enables communities to help disaster victims before external assistance comes. In this survey, it was observed that about 90% of the respondents noted that their community does not have such a facility. Another 6% or so do not have any idea about emergency stock. This is an issue which disaster managers and other stakeholders should be concerned with.

Community Emergency Shelter

The issue of emergency shelter is strange to most respondents. About 95% of the respondents noted that their communities do not have emergency shelter (fig.34). At the community discussion groups, most of the participants remarked that when they are displaced from their homes they use the local School or Church premises as temporal shelters.

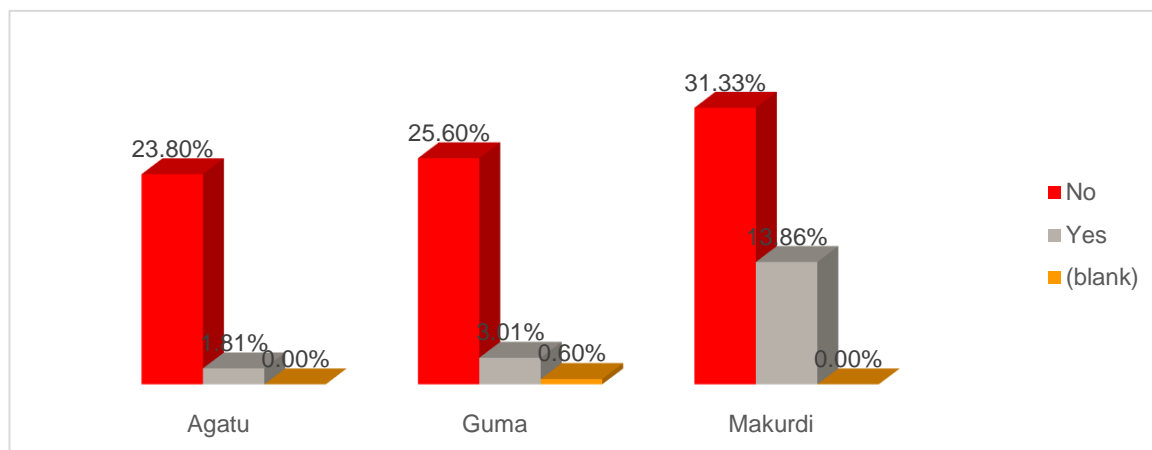
Household Response to Recent Flood

Majority of the responders tend to keep household valuables in safe places away from the reach of flood water. A considerable number of the respondents also noted that they usually do not know what to do. This attitude is dangerous and can expose the household to significant losses of valuable properties.

Community Based EWS

About 80% of the respondents remarked that they have never heard of the word Early Warning System. Only about 20 % of the population has such knowledge, mainly in Makurdi LGA This means that the issue of EWS is strange to the communities and most probably not available in their communities.

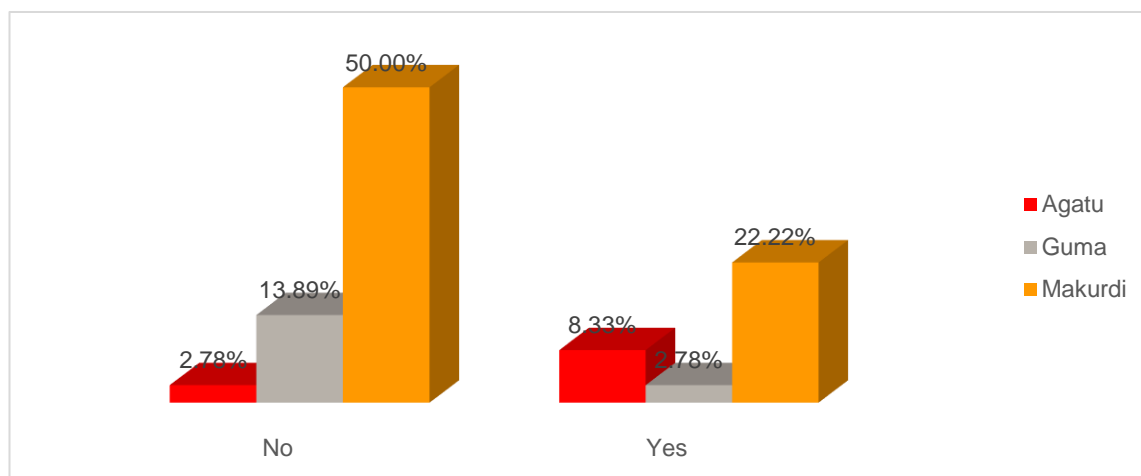
Figure 14: Knowledge of EWS



Indigenous Early Warning System

In response to availability of indigenous EWS, about 67% of all the respondents indicated that there is none (fig. 15). The remaining 30% or so, particularly in Makurdi LGA agree to know of some Indigenous EWS. This is revealing, if indeed it is true.

Figure 15: Indigenous EWS



4.4 Conclusion

Flood incidents in the State have become an annual event, occurring mainly in the months of August and September with disastrous consequences. This has been the trend in the last ten years and it is most likely to intensify with the phenomenon of climate change. The flood episodes are caused mainly by high intensity rainfall, overflow of river Benue and a wide range of unwholesome human activities.

This survey has clearly shown that disaster risk management at the three levels of consideration: State, Community and Household are very weak. At the State level, although there are legal and institutional frameworks for DRM, the focal point on DRM in the state (Benue SEMA) lacks staff, equipment, adequate funding and Policy document to effectively manage flood disasters. In addition, the state does not have an Early Warning System for flood disaster. As a consequence of these deficiencies, Benue SEMA is incapacitated. Their response to flood emergency is poor, and very little of disaster risk prevention is done. Above all, collaboration with relevant

stakeholders in DRM is poor. Benue SEMA appears to be mired in their shortcomings without seeing the need to reach out for assistance other than the State government.

At the community level, the situation is worse. All the communities covered in this survey appear to be waiting for the state government to come and get things done. There is no community effort, no initiative and no focus. As a consequence, the communities do not have any thing on ground, as it were, to prevent, mitigate, prepare or respond to flood hazard. So, flood incidents occur freely in these communities with devastating consequences.

The situation at the household level has a good resemblance with that of the communities. There is very little knowledge of DRM at this level. Household vulnerability to flood disaster is high, their capacities are low and as a consequence, disaster risk is high.

4.5 Recommendations

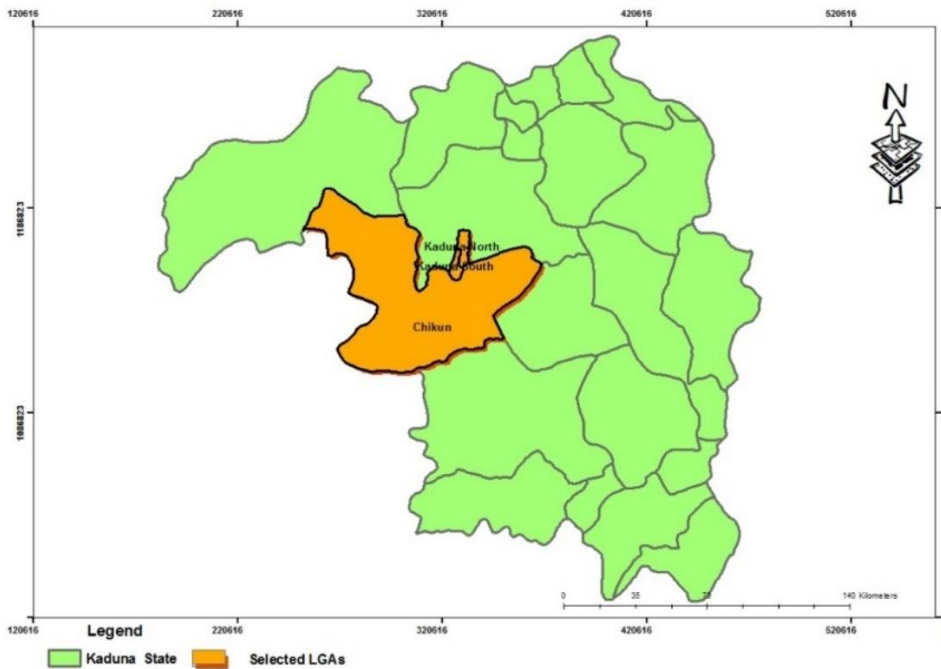
Based on observations made during this survey, the following recommendations are suggested as a way of improving flood risk management in the state:

1. Additional staff should be employed trained in Benue SEMA in order to enhance their efficiency. The present practice of moving staff around MDAs and Benue SEMA does not allow for professionalism in disaster management.
2. There should be increased funding for Benue SEMA in order for them to be able to procure essential equipment and related facilities. This certainly will improve their capability;
3. There is an urgent need to establish an Early Warning System for flood disaster monitoring and communication. This will help in reducing damage and losses from flood incidents.
4. Public enlightenment campaign should be intensified in order to change some cultural practices of the people which cause flooding;
5. Simulation drills should be done regularly in these communities so that people will know what to do before and during flood incidents;
6. Communities should be given some basic trainings in Emergency Response, in order for the communities to be able to conduct some response operations before external help comes;
7. Communities should also have a Platform for coordinating DRM. Otherwise, they will remain unfocused;
8. Some emergency stock should also be made available to communities, so that flood disaster victims can have some support before external help arrive in the community.

5.0 Kaduna State

The survey in Kaduna State was done at three levels: State, Community and Household levels, using the various assessment instruments described in chapter three.

Figure 16: Map of Kaduna State showing survey LGAs



5.1 State Level Assessment

5.1.1 Legal and Institutional Framework for DR

The Institution established by the State Government for Disaster Risk Management (DRM) is the State Emergency Management Agency (SEMA), hereafter referred to as Kaduna SEMA. It was established by a law passed by the State House of assembly and signed by the then Executive Governor of the State, Alhaji Ahmed Moh'd Makafi on 17th February 2003. Before the establishment of the Agency, an Emergency Relief Committee was constituted by the State Government to provide humanitarian relief to disaster victims. It was not given the mandate to manage disasters.

The mandates of the agency include:

- i. Notify and advise the State Government of any disaster occurring in the State;
- ii. Respond to any disaster within the state;
- iii. Seek assistance from Government, individuals and other non-governmental bodies'
- iv. Carry out disaster management activities in the state;
- v. Determine the ways of obtaining and distribution of relief materials to needy persons and communities affected by a disaster;
- vi. Determine the priority of all emergency relief operators in the state,

- vii. Coordinate the effort and activities of other government and voluntary organizations in emergency relief operations; and
- viii. Control of Fire Service.

Kaduna SEMA coordinates disaster risk management in the state. According to the Kaduna State Sector Implementation Plan (SIP) 2017-2019 (pg.14), other stakeholders are NEMA, REDCROSS, NSCDC, NPF, FRSC, CAN, JNI, KASUPDA, RUWASSA, KADSACA, HEPA, KAPWA, UNICEF, IOM, NIMET, NIHSA, Nigerian Army, Nigerian Airforce, Police, Save The Children, NOA, Federal Fire Service, Ministries Of Budget and Planning, Health, Women Affairs, Environment, Agriculture, Local Government, Education, Works And Transport, CBOs, FBOs, NGOs, Media, Water And Sanitation, SSS, Etc.

Kaduna SEMA has a governing Board chaired by the Deputy Governor of the state while the Executive Secretary of SEMA serves as the Secretary. The Board has 12 members representing the broad spectrum of the stakeholders. The Board meets quarterly usually to review matters related to emergencies.

Kaduna SEMA has four departments. These are:

- a. Department of Administration and Finance;
- b. Department of Finance and Supply;
- c. Department of Planning, Relief and Natural Disaster Management; and
- d. Department of Fire Service.

5.1.2 Policies and Plans

Kaduna State does not have a Policy document on DRM. However, it has two Plans on DRM. These are:

- i. Kaduna State of Nigeria Emergency Contingency Plan; and
- ii. Kaduna State Sector Implementation Plan (SIP) 2017 – 2019.

Emergency Contingency Plan

This document was produced in January 2014 by Kaduna SEMA. It outlines characteristics of the predominant hazards in the state and possible strategies to be adopted in responding to any incident that may occur from any of these hazards.

Kaduna State Sector Implementation Plan (SIP)

The Kaduna State SIP Plan 2017-2019 is a strategic Emergency Management Plan that describes a list of Programs / Activities / Projects which the Kaduna SEMA hopes to carry out between 2017 and 2019. It also outlines expected outputs, Key Performance Indicators, Output Targets and MDAs Responsible for carrying out the Programs/Activities/Projects. The Plan, however, does not contain expected Budget Cost/Expenditure. It also does not contain Baseline Output Values prior to the commencement of the Plan period.

5.1.3 Budget for DRM

There is an annual budget for DRM in the State. The State government provides all the financial requirements for DRM in the State. The money is channelled through SEMA. The average budget for SEMA is about 300 million naira per annum. All this money can be accessed by SEMA as needs arise. According to the Executive Secretary of SEMA- Mr. Ben Kure, "this budget is low, considering the number of things to be done".

5.1.4 Personnel and Facilities / Equipment for DRM Activities

Kaduna SEMA has 202 personnel in its establishment. Some are skilled while some are unskilled. The State Fire Service has been integrated with SEMA, thus further strengthening SEMAs capacity in disaster management. According to the Kaduna State Sector Implementation Plan (SIP) 2017 – 2019 (pg.18), facilities available at the State SEMA are:

- i. Warehouses;
- ii. Firefighting Engines;
- iii. Operational Vehicles; and
- iv. Office Accommodation.

5.1.5 Flood Hazard Profile

Flood hazard profile for the State was developed from responses obtained from a wide range of Stakeholders at the State Stakeholders Workshop held on June 27th and 28th, 2018 (see appendix). Some of the information was also derived from Key Informant Interview as well as responses from Communities during Focused Group Discussion and interviews at Household levels.

5.1.6 Locations of Damaging Floods

The locations of the communities with damaging recurring floods in the state are listed in table.

Table 6: List of communities with recurring flood incidences

KADUNA NORTH LGA	KADUNA SOUTH LGA	CHIKUN LGA	KAURA LGA
Rafin Guza - Kawo	Barnawa	U/ Gimbiya	Manchok
U/ Rimi	Bachama Road, T/Wada	Romi,	Hayin Biniki
Malali	Ung. Muazu	Karatudu	
Kabala Constain	Kinkinau	Gbagi Villa	
Abubakar Kigo Road New Extension	Ogbomosho Road by rail way	Television	
	Tudun Nupawa	Narayi	
		Gonin Gora	
		Kamazou	
		Nassarawa by flour mills	
		Kudenda	
		Danbushiya	
		Ung Maigero	
		Rido	
		Chikun Village	
		Dendo	

5.1.7 Characteristics of the flood hazard

Table 7: Some other attributes of the flood hazard are:

Flood Attribute	Description
Frequency of Occurrence:	Occurs yearly in recent years
Seasonality:	Usually from August to September
Causes:	Intense rainfall, Poor drainage, Blocked drainage, Building across water ways, Flooding of River Kaduna onto communities on the banks of the river
Magnitude:	Affects over one hundred people each year

Flood Attribute	Description
Effects:	Usually affects Houses, Properties, Farmlands, Livestock, Business Places and Infrastructures

5.1.8 Preparedness for Disaster Incidents

Kaduna SEMA has a few items on ground in preparedness for any disaster incident. These are general items, not specific to flood incidents. Their preparation is for any disaster incident, including flood hazard. They are not able to separate their preparation for flood incident from the overall preparation for all disasters. The available items are:

- i. A multi-hazard Contingency Plan of 2014;
- ii. A State Emergency Management Plan (SIP) for the period 2017 – 2019;
- iii. Toll free telephone number No. 112 (still on test run);
- iv. Periodic public enlightenment on issues of flood hazard, particularly to communities located close to the bank of river Kaduna, such as Rafin Guza, Kakuri and Angwa Rimi;
- v. There are also occasional Television and Radio interviews with the Executive Secretary of SEMA on flood disaster issues;
- vi. The Fire Service, which is an integral part of Kaduna SEMA, conducts occasional drills on fire safety. There has not been any drill on flood safety.
- vii. Some of the staff of the Agency have some form of training in flood disaster management;
- viii. There is a store containing emergency relief materials, but there is no store for medicines;
- ix. There are Emergency / Rapid response vans and can access the Nigeria Air Force Helicopter for assistance.

5.1.9 Early Warning System

Theoretical and empirical observations suggest that in any geographical region where Early Warning System (EWS) is deployed and operational, disaster incidences are few and less destructive. This is so because, residents of the region are pre-warned of impending danger and they are able to get out of harm's way as well as protect their assets and properties. Thus, it was important to find out the nature and effectiveness of EWS in the State.

Responses from across the broad spectrum of stakeholders, including SEMA, MoE, MoWR, indicate that there is no EWS in the State. However, according to a majority of respondents, the annual rainfall prediction from NIMET is announced on TV to residents of the state. In addition, the annual flood prediction by NIHSA is also disseminated to residents of the state. The prediction by NIMET is about rainfall characteristics and would require extra effort to convert the information to flood prediction. The prediction by NIHSA can get off the mark. For example, the 2017 prediction shows that out of all the LGAs that were predicted to experience flood in that year, only 20% had flood hazard, while 80% of the LGAs did not.

5.1.10 Response Mechanism

Kaduna State has emergency response team composed of NRCS, NEMA, LEMC & SEMA, NPF and NSCDC. It also has access to some equipment through the partnership existing between SEMA and these organizations.

5.1.11 Challenges

According to the Executive Secretary of Kaduna SEMA, the principal challenge which the State has is inadequate funding for achieving program and activities in their strategic Plan. In addition to this, the consensus at the State Stakeholders Workshop is that there are also:

- i. Rivalry between critical stakeholders in emergency situation;
- ii. Weak coordination mechanism by SEMA
- iii. Lack of commitment from agencies;
- iv. Bureaucracy
- v. Inadequate relevant skills

However, according to the Kaduna SIP 2017-2019 (pg. 13), The challenges of Kaduna SEMA include the following:

- i. Poor financial management;
- ii. Lack of staff in the Agency;
- iii. Inadequate conduct of quarterly coordination meetings;
- iv. Irregular contingency plan 2016;
- v. Irregular developed work plan;
- vi. Logistics;
- vii. Lack of software in the Agency; and
- viii. Low capacity on information and communication technology.

5.1.12 Suggestions / Way forward

At the Kaduna Stakeholders Workshop, these are the responses:

- i. Adequate and timely funding;
- ii. Purchase of EWS equipment;
- iii. Man power recruitment;
- iv. Training and capacity building;
- v. Regular coordination meeting between stakeholders;
- vi. Regular simulation drills;
- vii. Commitment by relevant agencies

5.2 Community Level Assessment

Assessment at the Community level was conducted mainly through the instruments of:

- i. Focused Group Discussion (FGD); and

ii. Participatory Vulnerability and Capacity Assessment (PVCA).

FGD was conducted in two communities in the state: Nassarawa (Lat. 10.472625, Long. 7.398515) and Television (Lat. 10.44502, Long. 7.430965) Communities. PVCA was conducted in Malali community (Lat.10.558050 Long. 7.466470, using five tools: Problem Tree, Seasonal Calendar, Historical Timeline, Venn Diagram and Community Mapping. In each community, two FGDs were conducted: One for Men and the other for Female. There was a consensus among these two demographic groups with reference to all the issues raised concerning flood hazard in the community. The outcomes of these investigations were integrated into a single report as shown below:

5.2.1 Causes, Frequency and Effects of Flooding

Flooding in the sampled communities is essentially urban flood. However, river Kaduna overflows its banks once in three years and floods the community.

According to the residents, flooding is caused mainly by:

- i. Poor drainage. Many streets do not have drainage, while the ones that are there are shallow and unable to convey storm drain out of the community;
- ii. Blockage of the few drainages by indiscriminate dumping of refuse into public drains, hoping that the rains will flush away the refuse;
- iii. Building on water ways which eventually blocks passage of water. An example was given of a filling station within the community; and
- iv. Periodic overflow of river Kaduna into adjacent communities.

Flood frequency is perennial and occurs mostly in the months of August and September. Flood occurrence leads to destruction of houses, properties, disruption of businesses, outbreak of epidemics and damage to farmlands, livestock and farm products.

5.2.2 Mitigation Measures by Communities

The communities engage in periodic exercise of evacuation of drainages and sensitization of the community on the need to dispose refuse properly as well as vacating flood prone areas.

5.2.3 Availability of Early Warning System

The community has no formal Early Warning System in place. However, the communities get periodic announcements from the State SEMA on rainfall prediction.

5.2.4 Preparedness for Flood

The communities are not prepared for any form of disaster. There is no store for emergency medicine; there is no emergency shelter for victims during flood disaster. The communities do not have any trained personnel on Disaster Risk management.

5.2.5 Response Mechanism for Flood Disaster

The communities do not have any response capability in times of flood incidence. In the event of a flood, victims take refuge in homes of friends and relatives. There is no response team or equipment in any of the communities. The NGOs provide the largest support, while Churches and Philanthropists provide relatively small assistance, but they are always there for the communities.

5.2.6 Challenges hampering Flood Hazard Mitigation

- i. There is no capacity to curtail flood within the communities.
- ii. The communities do not have financial strength and capability to construct drainages to avert flood.
- iii. In Nasarrawa community, for example, the filling station constructed along the Express Road obstructs water flow out of the community;
- iv. Waste evacuation vans do not enter the communities to pack up refuse, thereby making some community members dump refuse indiscriminately into drainage.

5.2.7 Needs of the Community

- i. Government intervention in construction of drainages within the communities;
- ii. Provision of emergency shelter and medicine stores in the communities are needed;
- iii. The communities require public refuse dump for safe disposal of refuse; and
- iv. The communities need some of their youths trained on DRM who can render assistance during flood incidence.

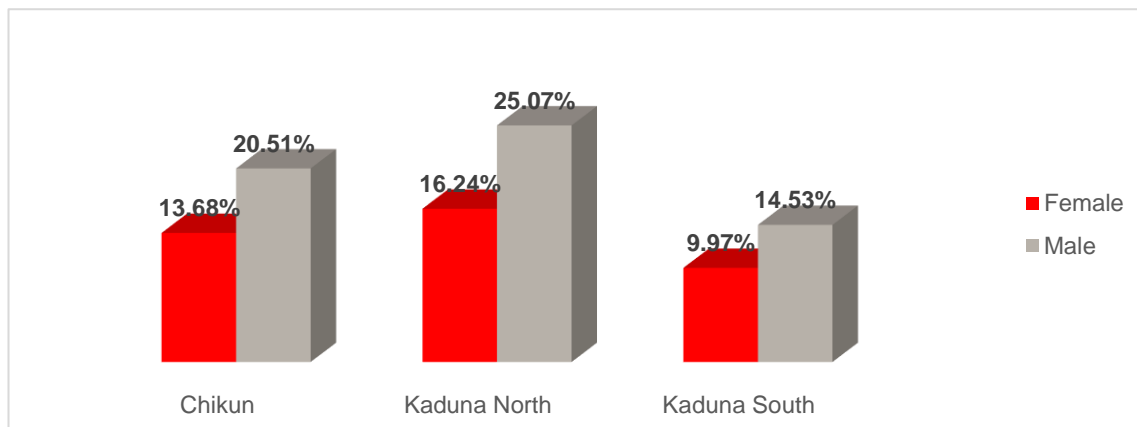
5.3 Household Level Assessment

Opinion of Households was sought in assessing the causes and effects of flood hazard in the State. Issues related to their preparedness and response to flood hazard were also raised with them. Household social and economic characteristics were also assessed in order to determine their various levels of vulnerabilities. Three LGAs were covered in this survey. These are Kaduna North, Kaduna South and Chikun LGAs. The responses are similar to the responses at the State and Community levels. In order to avoid undue repetitions, therefore, some of the responses given at this level were dropped from this report. The following represents observations made during the survey:

5.3.1 Demographic composition of respondents

About 34% of the respondents are from Chikun LGA, about 41% from Kaduna North LGA and about 24% are from Kaduna South LGA (fig.48). These figures represent the proportional sample size determined for the survey. Opinions of both male and female respondents were sought in this survey. In all the LGAs, male respondents were more than the female respondents. This pattern is due to the cultural background of these communities which tends to make the males more visible to visitors. The pattern was more exhibited in Kaduna North LGA.

Figure 17: Gender respondents in Kaduna State

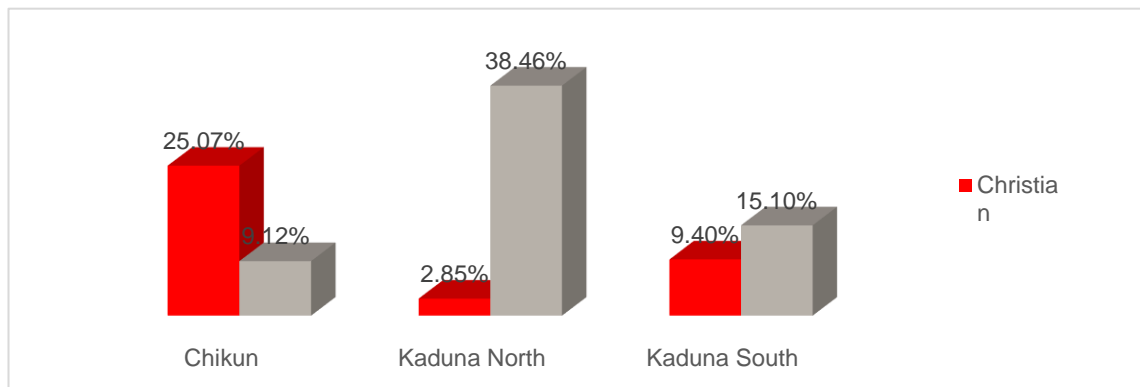


5.3.2 Religion

Information on religion of the people is needed so that humanitarian assistance can be appropriate in the event of disaster. In addition, this information will enable disaster managers obey religious laws in times of emergency.

The result of the survey shows that there is a good mix of Christians and Muslims in the three LGAs. In Chikun LGA, Christians were more, while in Kaduna North and Kaduna South LGAs, Muslims were in majority (fig.49). Thus, in delivering relief materials to flood disaster victims, this fact should be borne in mind. Disaster managers should also be aware that different customary laws exist in these different LGAs.

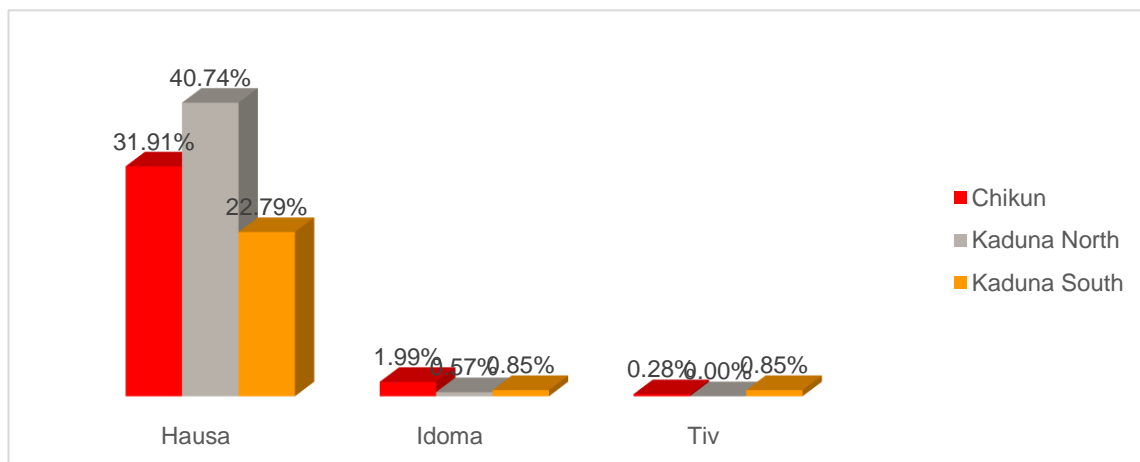
Figure 18: Religion of respondent in Kaduna State



5.3.3 Major languages spoken in the state

The issue of language is important in order for disaster managers to know the best language in which to communicate messages related to flood hazard risks to the people. In this survey, it was revealed that over 95% of the entire respondent across the three LGAs have Hausa language as the common language of communication (fig.50). Thus, in the event that IEC materials need to be translated to local language in these LGAs, Hausa language can be used.

Figure 19: Common languages spoken in Kaduna State



5.3.4 Level of Disability in the State

An assessment of the level and types of disabilities in a community gives disaster managers requisite information on types of humanitarian relief material to take to victims in times if emergency. Besides, it also informs disaster

managers on issues related to communication methods to deploy in times of emergency. It also informs preparedness and response operations.

In this survey, over 90% of the respondents indicated that they do not have any form of disability. Only a small proportion of the population agrees that they have problems with walking, hearing and seeing. It is important that these small proportions of the population that are disabled are taken into consideration during emergencies.

5.3.5 Level of Educational Attainment

The higher the educational attainment of an individual, the lower is his / her vulnerability to disasters. Illiteracy and ignorance are key issues of social vulnerability. In this study area, about 80% of the respondents have Secondary School and Tertiary Education Certificates (fig.52). This enables the population to communicate in English language, appreciate environmental issues and have capacity to be trained in disaster management.

Table 8: Educational attainment of respondents

Count of start	Column Labels			
Row Labels	Chikun	Kaduna North	Kaduna South	Grand Total
Informal Education	1.99%	3.13%	1.42%	6.55%
No formal Education	1.99%	3.13%	1.99%	7.12%
Primary School Certificate	2.85%	3.42%	1.71%	7.98%
Secondary School Certificate	17.66%	17.66%	7.12%	42.45%
Tertiary	9.69%	13.96%	12.25%	35.90%
Grand Total	34.19%	41.31%	24.50%	100.00%

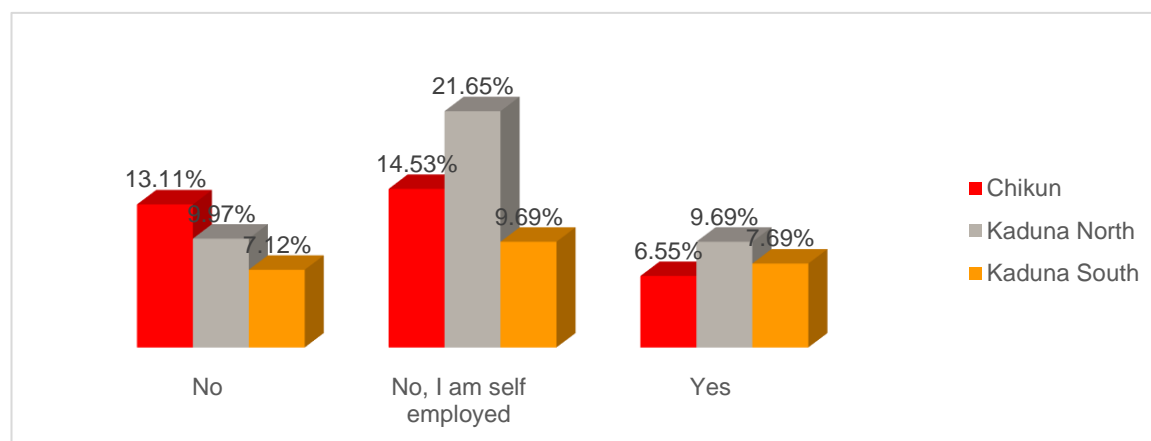
5.3.6 Status of Employment

Status and types of employment are major indices of economic vulnerability. Unemployed people are more vulnerable to disasters than employed people. Unemployed people tend towards poverty which leads to accumulation of risks and ultimately higher vulnerability. The higher the vulnerability, the higher is the disaster risk.

In this study, only about 30% of the population is unemployed (fig.53). 46% are self-employed, while 24% are employed by other organizations. This implies that the people have some form of capacity to remain resilient against the impact of flood disaster. Their income will enable them to evolve strategies for combating physical, social, economic and environmental vulnerabilities. They will be less dependent on external aid in the event of a disaster.

The 30% of the population that is not employed is a source of worry. This group of people is substantial, and they are vulnerable to flood hazard risks and stresses. It is important, therefore, that their plight should be taken into consideration in times of emergency relief.

Figure 20: Employment status in Kaduna State



5.3.7 Types of Employment

The issue of employment was explored further to know which organizations are engaging the 24% of the population who are employed by Organizations. The investigation shows that majority of them are working in Civil Service jobs (45%), with more in Kaduna South LGA. Only a few are engaged in the private sector, mainly in Chikun LGA, apparently due to the availability of numerous Industries in the LGA which offer job opportunities to people of the area.

5.3.8 Household means of livelihood

Livelihood types are numerous highly varied in the state. The result of the survey shows that people are engaged in apprenticeship, Farming, Fishing, trading and other vocations. However, trading is the most dominant (54%), with Kaduna North leading other LGAs (24%). This is due to the fact that Kaduna North LGA is essentially the commercial center of the State Capital

This information is important because, in the event of a disaster, it will be easy to imagine which sector of the economy incurred the most damage and losses. This will also inform recovery planning.

5.3.9 Household Annual Income

There is a wide range in annual income earned by residents of the State. Majority of the people are in the category of less than N50,000 per annum (31%), with Kaduna North having the highest number (14%). The second most common group is that of N100,000 – N250,000 (22%), with Chikun LGA topping the group. The category of people earning over N1 million per annum is small (6%) and Chikun LGA has about 2.6% of these people. It appears that the Industries in Chikun LGA are offering people living there the rare opportunity to earn mega salaries.

The implication of all these is that people who are employed have sufficient financial capacity to mitigate the impact of flood hazard, if they know what to do.

Table 9: Household annual income

Count of start	Chikun	Kaduna North	Kaduna South	Grand Total
Above N1Million	2.56%	2.28%	1.42%	6.27%
Less than N50,000	10.26%	13.68%	7.12%	31.05%
N100,000-N250,000	9.40%	7.41%	4.84%	21.65%
N250,000-N500,000	3.42%	6.27%	2.56%	12.25%

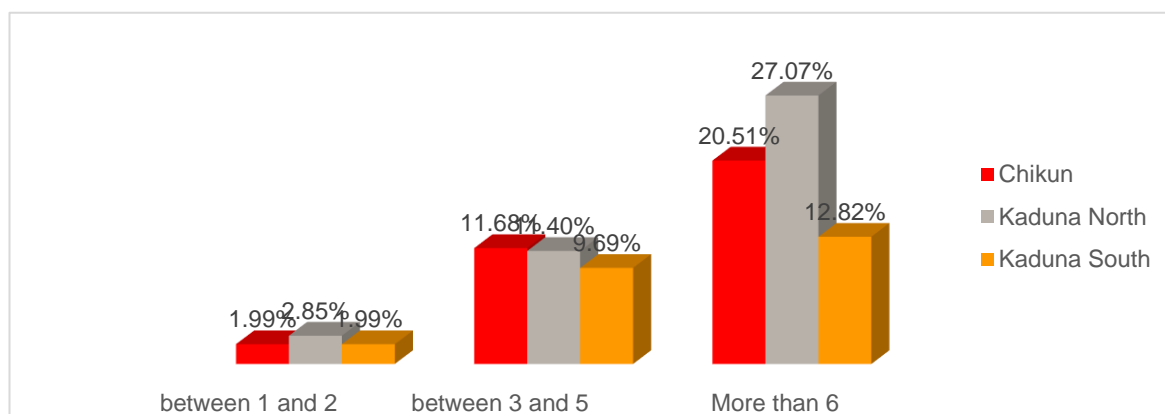
Count of start	Chikun	Kaduna North	Kaduna South	Grand Total
N50,000-N100,000	7.12%	7.12%	3.42%	17.66%
N500,000-N1Million	1.42%	4.56%	5.13%	11.11%
Grand Total	34.19%	41.31%	24.50%	100.00%

5.3.10 Size of Household

Size of household is related to vulnerability. The higher the number of persons per household, the higher is the vulnerability of the household to disaster risk. This is because; the cost of taking good care of the people will naturally be higher.

In this survey, about 60% of the people have more than six (6) persons per household. Out of these, Kaduna North LGA accounts for about 27%. This will be a great burden to heads of households and hence predisposes them to disaster risks.

Figure 21: Estimated household size of respondents

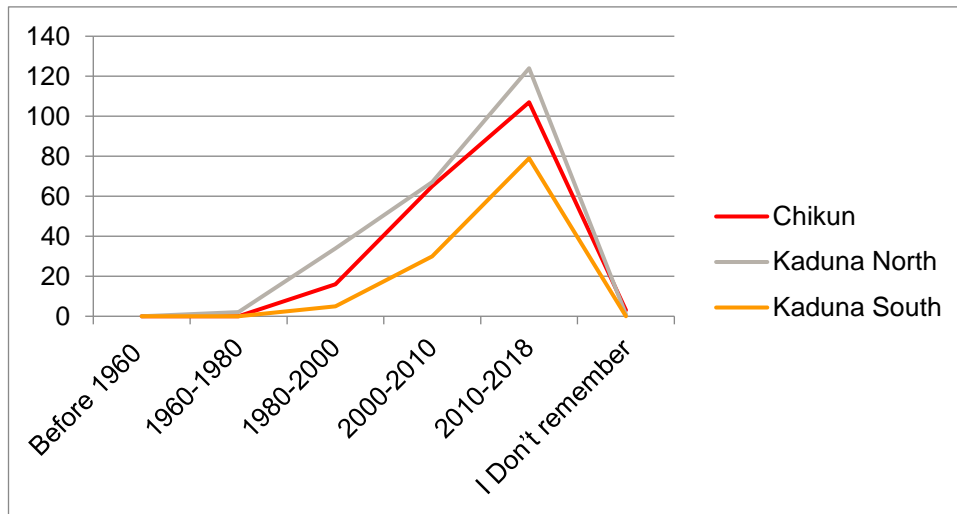


5.3.11 Historical timeline of flooding

There is a consensus that flood incidents in Kaduna State have become more frequent in recent years. Majority of the peoples believe that in the past eight (8) years, flood incidents have become very common (fig. 59). This view is more popular with residents in Kaduna North LGA

This indicates that the forthcoming years, flooding is going to be a recurring hazard. Consequently, issues around flood disaster preparedness and response should be taken more seriously. There should be more collaboration and partnership among disaster management agencies at the three tiers of government, line MDAs, NGOs and the Community.

Figure 22: Historical timeline of flooding in Kaduna State

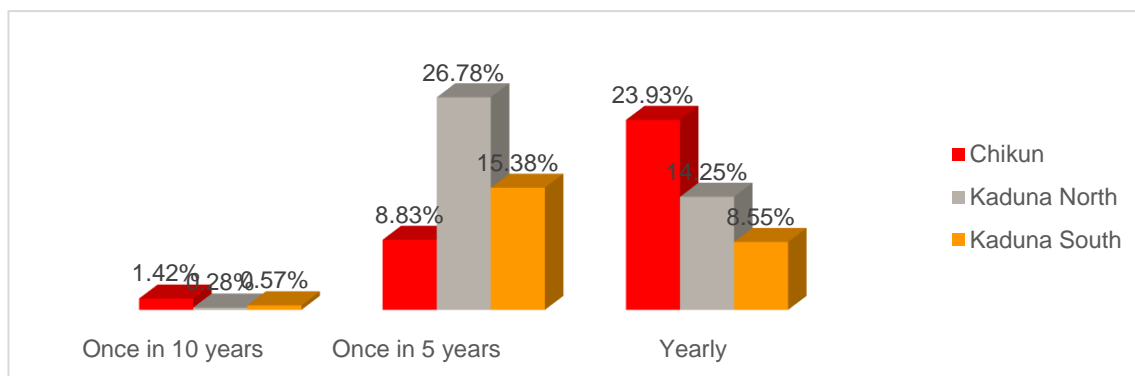


5.3.12 Frequency of Flood Occurrence

Results obtained from this survey indicate that about 47% of the respondents across the three LGAs are of the opinion that flood occurrence is a yearly phenomenon. 24% of these are from Chikun LGA (fig.60). Another 51% of the respondents agree that flood incidents occur once in 5 years. Out of these, Kaduna North LGA accounts for 27%. Overall, the consensus (98%) is that flood incidents occur at least once in five years.

Again, this calls for concerted efforts by disaster managers and all stake holders to be more pro-active in mitigating this hazard. A once- in- five years devastating flood can erode all the social and economic achievements of ten years.

Figure 23: Frequency of flood



5.3.13 Nature of Properties affected in the Community

The nature of properties damaged by flood incidents depends on the nature of socio -economic activities in that location. When a community is inundated, everything submerged in the water is destroyed. Thus, in this study, the respondents noted that virtually all types of assets and livelihoods, including houses, farmlands, business places, infrastructures, livestock, etc., are usually affected by flooding.

The result of this survey indicates that Houses are the most damaged among all assets and livelihoods. Kaduna North accounts for the highest number among the three LGAs. Farmlands are the second most affected asset in

the State. Kaduna North also records the highest number in this category. Business places are the third most affected, with Chikun LGA leading.

This piece of information should be useful to disaster managers in computing damage and losses after a flood disaster incident. It will also be useful for assessing Post Disaster Needs of affected Communities.

5.3.14 Flood Effects on Households

At the household level, the types of properties damaged are also reflective of the location of the household, whether in urban area or in rural area. In this survey, Household properties and Valuables at home form the bulk of damage and losses (65%) in these three LGAs Household properties, however, incurred the most damage (Fig. 62). All the LGAs had equal numbers of damages. This was closely followed by Valuables in homes.

This observation is also instructive to disaster managers with reference to Damage and Loss Assessment as well as Post Disaster Needs Assessment.

Table 10: Level of damage by flooding to households in Kaduna State

	How was your household affected by the most recent flood						
	Lives were lost	Some valuables lost	Crops damaged	Household properties damaged	House damaged	Others	Was not affected
Chikun	2	65	15	59	57	51	2
Kaduna North	8	65	27	59	31	44	4
Kaduna South	5	54	27	58	39	22	1

5.3.15 Causes of flooding

Responders believe that flooding is caused by a wide range of factors. However, majority of them believe flooding in the State is mainly caused by excessive rainfall, overflow of river Kaduna and human activities (fig. 64). These observations are in conformity with theoretical and empirical principles of flood occurrence (Gregory and Walling, 1985) This fact should inform preventive and mitigation measures.

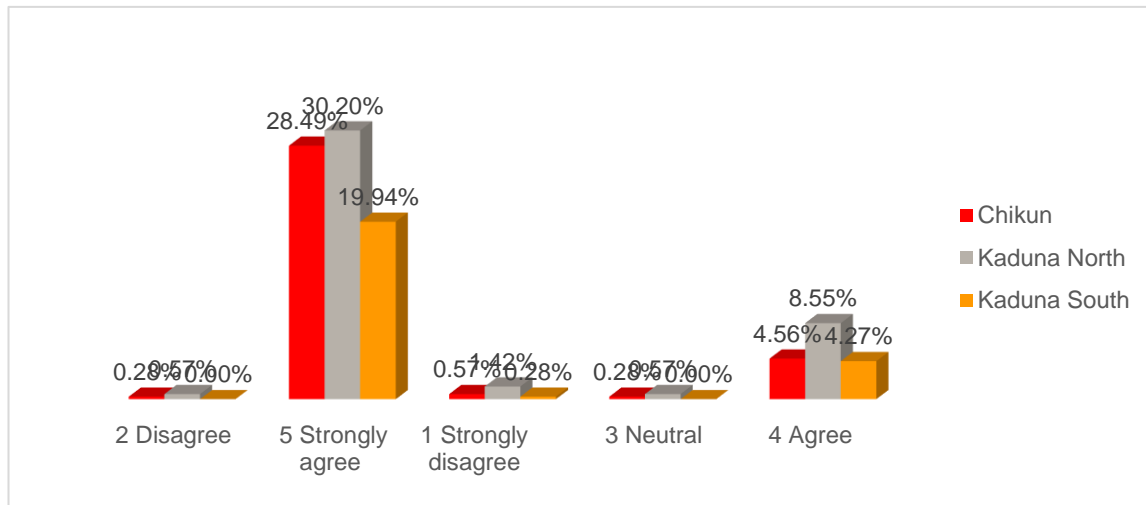
Table 11: Causes of flooding in Kaduna State

	What do you think caused flooding in your community						
	Excessive rain	Overflow of river Benue	Spiritual causes	Human Activities	Deforestation	I don't know	Others
Chikun	89	48	5	74	2	10	12
Kaduna North	102	60	3	91	10	1	16
Kaduna South	63	41	0	58	4	1	18

5.3.16 Dumping of refuse into drainage

One of the numerous human activities, implicated in flood occurrence is dumping of refuse in drainages. Over 80% of the responders strongly agree that this factor is a major cause of flood disaster in all communities in the three LGAs (Fig. 24) And other 16% or so also agree with this statement.

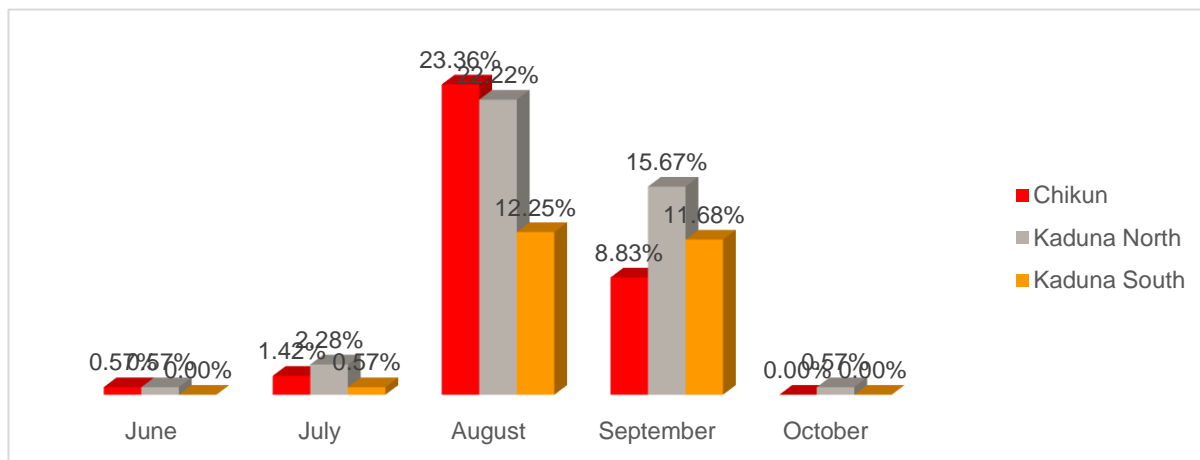
Figure 24: Dumping of refuse as a cause of flooding in Kaduna State



5.3.17 Period of Flood Occurrence

Virtually all the respondents believe flood incidents occur in the months of August and September across the State (fig. 25). This information is important for flood disaster managers in working out strategies for prevention, mitigation, preparedness and response.

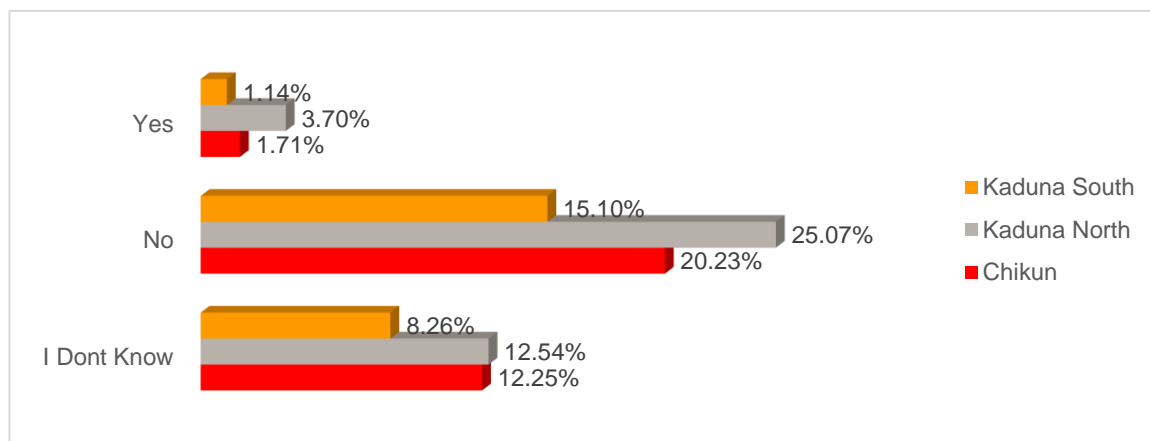
Figure 25: Flood occurrence months in Kaduna State



5.3.18 Organization providing support during flood disaster

Over 60% of the respondents observed that no support comes to them during flood disaster. About 34% of the respondents are not sure whether there is assistance or not. Only about 6% of the respondents agree that some forms of assistance came to their communities during flood disaster. This is important information for disaster managers and humanitarian relief providers. The people are feeling abandoned in their times of need.

Figure 26: Assistance to flood victims

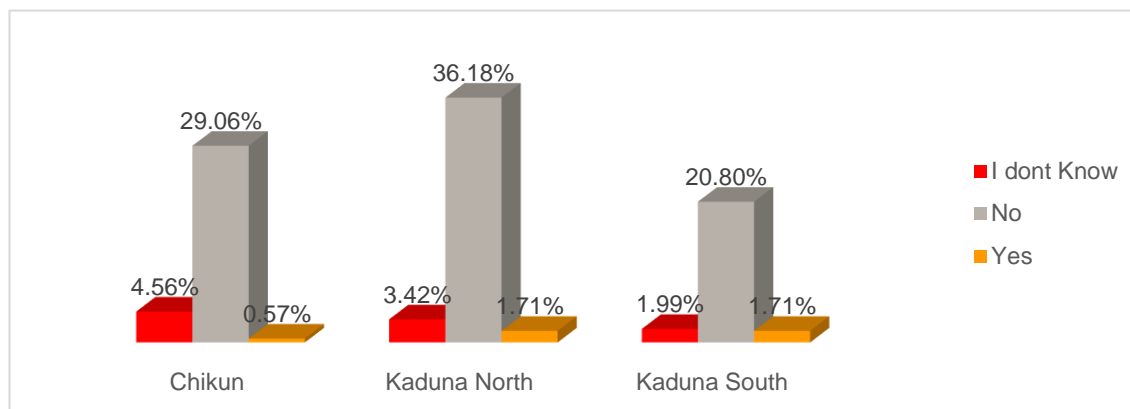


5.3.19 Previous Training on DRR

Across the three LGAs covered in this survey, most of the opinion is that there has not been any form of training on DRR in their communities. Over 90% of the respondents made this observation (fig.27). This implies that residents in these communities do not know what to do before or after a flood disaster. This condition further increases the vulnerability of the residents to flood disasters.

There is, therefore, the need to offer some form of DRR training to these communities to reduce their vulnerability to flood incidents.

Figure 27: Previous training on DRR

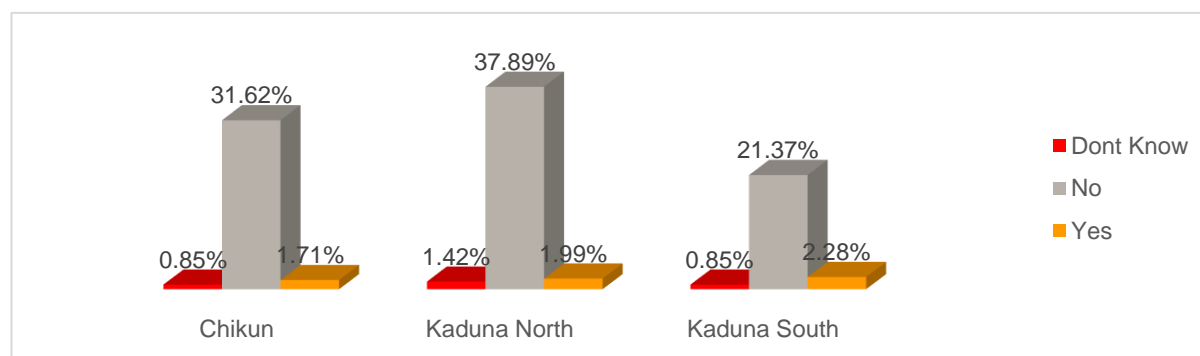


5.3.20 Participation in Simulation/ Drill Exercise

Over 90% of the respondents noted that they have never attended any simulation exercise in flood disaster (fig. 28). This again shows that household be ignorant about what to do before and during a flood disaster. Ignorance increase vulnerability and increases disaster risks.

There should be periodic simulation drills for households in the future in order to reduce their vulnerability to flood incidents.

Figure 28: Participation in DRR drills



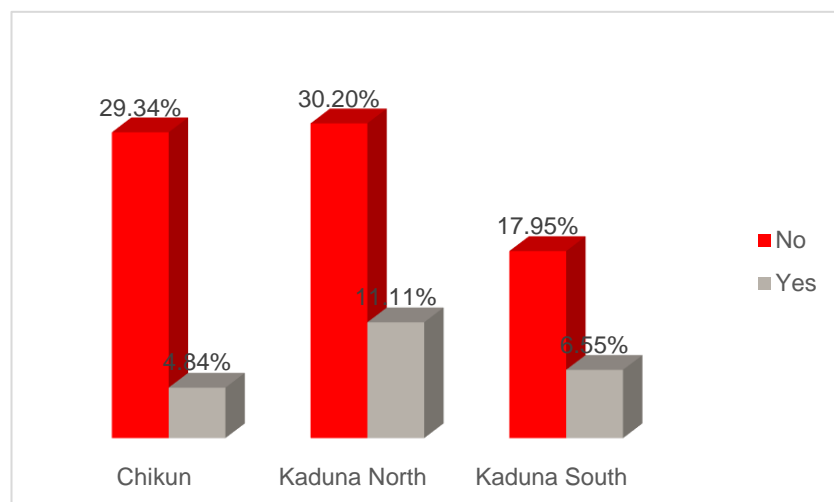
5.3.21 Community Emergency Shelter

The consensus is that the communities have emergency shelters which can serve as temporal accommodation for disaster victims. These may be Schools, Churches or Mosques or IDP Camps.

5.3.22 Community Based EWS

About 80% of the respondents remarked that they have never heard of the word Early Warning System. Only about 20 % of the population has such knowledge (fig.29). This means that the issue of EWS is strange to the communities and most probably not available in their communities.

Figure 29: Community Early Warning Systems



5.3.23 Warning Announcement

There are no prior warnings of an impending flood incident in these communities. About 65% of the surveyed population expressed this view. This implies that most people are caught unaware by the flood hazard when it occurs. People will not be prepared for the incident and yet it comes on them.

5.3.25 Indigenous EWS

About 75% of the respondents indicated that there is no such thing in their community. However, about 25% believes there exist such a thing. It will be interesting to know how this works.

5.3.26 Nature of indigenous EWS

Among the responders who believe an indigenous EWS exists, majority of them are of the opinion that marking of features on river is how this EWS works. Some also believe that it is through cultural beliefs prediction, while some others think it is through rainfall prediction.

Marking of features on river valley and rainfall predictions are essentially scientific approaches to developing EWS. It will be interesting to see how these also apply to Indigenous EWS.

5.3.27 Time taken for emergency response

The consensus is that it takes more than 24 hours before help gets to flood victims in the communities. Over 90% of the respondents attested to this. This makes it very important for communities to have their own stock of emergency supply and some trained ERT.

5.4 Conclusion

Flood incidents in the State have become an annual event, occurring mainly in the months of August and September with disastrous consequences. This has been the trend in the last ten years and it is most likely to intensify with the phenomenon of climate change. The flood episodes are caused mainly by high intensity rainfall and a wide range of unwholesome human activities.

This survey addressed disaster risk management at three levels: State, Community and Household levels. At the State level, there are legal and institutional frameworks for DRM. The focal point on DRM in the State is Kaduna SEMA. This agency has a considerable number of staff, particular with the integration of the State Fire Service with the Agency. The Agency lacks some vital equipment and requires more funding to effectively manage flood disasters. In addition, the state does not have an Early Warning System for flood disaster. Their continued dependence on NIMET and NIHSA for information on flood prospects in the State make them vulnerable to this recurring flood.

At the community level, the situation is worse. All the communities covered in this survey appear to be waiting for the state government to come and get things done. There is no community effort, no initiative and no focus. Consequently, the communities do not have anything on ground, as it were, to prevent, mitigate, prepare or respond to flood hazard. So, flood incidents occur freely in these communities with devastating consequences.

The situation at the household level has a good resemblance with that of the communities. There is very little knowledge of DRM at this level. Household vulnerability to flood disaster is high, their capacities are low and therefore, disaster risk is high.

5.5 Recommendations

Based on observations made during this survey, the following recommendations are suggested as a way of improving flood risk management in the State:

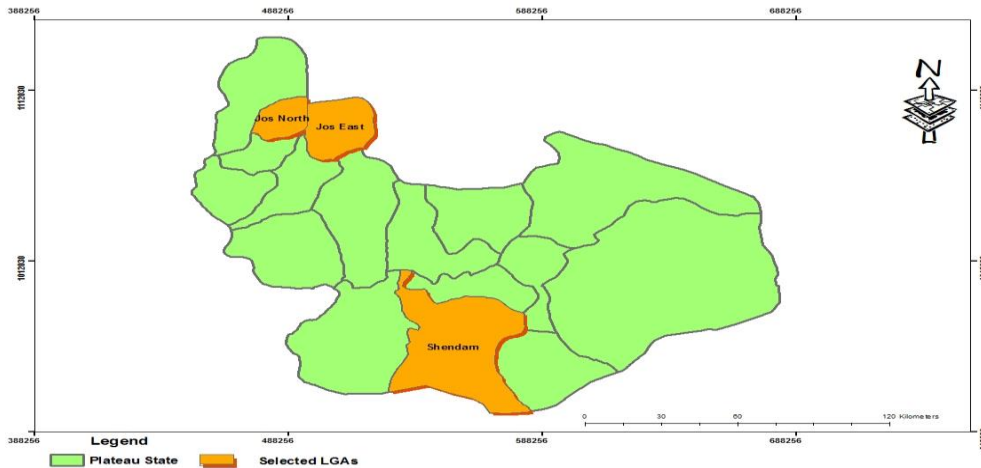
1. There should be increased funding for Kaduna SEMA for them to be able to procure essential equipment and related facilities. This certainly will improve their capability;

2. There is an urgent need to establish an Early Warning System for flood disaster monitoring and communication. This will help in reducing damage and losses from flood incidents.
3. Public enlightenment campaign should be intensified to change some cultural practices of the people which predisposes them to flooding;
4. Simulation drills should be done regularly in these communities so that people will know what to do before and during flood incidents;
5. Communities should be given some basic trainings in Emergency Response, for the communities to be able to conduct some response operations before external help comes;
6. Communities should also have a Platform for coordinating DRM. Otherwise, they will remain unfocused;
7. Some emergency stock should also be made available to communities, so that flood disaster victims can have some support before external help arrive in the community.

6.0: Plateau State

The survey in Plateau State was done at three levels: State, Community and Household levels, using the various assessment instruments described in chapter three.

Figure 30: Map of Plateau States with locations surveyed



6.1 State Level Assessment

6.1.1 Legal and Institutional Framework for DRM

The Institution established by the State Government for Disaster Risk Management (DRM) is the State Emergency Management Agency (SEMA), hereafter referred to as Plateau SEMA. It was established by an Act of the State House of Assembly in 2012. The Mandate of the Agency includes the following:

- i. Coordinate the activities of disaster management both natural and man-made
- ii. Liaising with stakeholders for their involvement
- iii. Planning and implementation of programs for mitigation and response
- iv. Rehabilitation of disaster victims in camps
- v. Supply of humanitarian relief to victims of disaster; and
- vi. Undertake needs assessment after a disaster event

According to the 2016--2017 Plateau State Contingency Plan (2015; pg. xi) "The mandate to coordinate disaster management in all its ramifications in the state is vested on the Plateau State Emergency Management Agency (PSEMA) based on its Act of establishment.

PSEMA is structured into five departments. These include:

- i. Department of Internal Audit
- ii. Department of Administration
- iii. Department of Finance and Supply
- iv. Department of Relief and Rehabilitation; and
- v. Department of Monitoring, Evaluation, Search and Rescue

There are plans to include additional Units into the existing structure of PSEMA for more efficiency. The additional Units include:

- a. Planning Research and Statistics
- b. Information and Public relations; and
- c. Legal Services

6.1.2 Policies and Plans

Plateau State does not have a Policy document for DRM. Plateau State has one plan for DRM. It is called Plateau State Contingency Plan 2016 – 2017. This document was published in 2015 by Justice Development and Peace Caritas, Catholic Archdiocese of Jos and OXFAM, Nigeria.

Plateau State Contingency Plan 2016 – 2017

The Plan was developed to provide a basis for coordination of humanitarian response in the event of a major disaster for an initial ten days period by PSEMA. The document adopts a multi-hazard approach and identified flood, epidemics, communal clashes and terrorism as probable disasters that can cause high level impact and displacement of persons. A population of 7500 was used as the benchmark for planning assumptions.

6.1.3 Budget for DRM

All the finances required for DRM in Plateau State comes from the State government. The amount of money budgeted and released to PSEMA varies from year to year. For example, in 2017, 100 million naira was budgeted for DRM in the State. However, less than 30 million naira was available to PSEMA. In this year 2018, 75 million naira has already been spent as at first week of July 2018. There is hope in PSEMA for a supplementary budget for the rest of 2018 due to the recent crisis of Herdsmen and Farmers in Barikin Ladi area of the State.

According to the Executive Secretary of PSEMA,

the Agency is "supposed to receive 2% of State Ecological Fund to run the Agency. But this has never been realized."

6.1.4 Personnel for DRM

PSEMA has only two (2) permanent staff since its inception in 2012. Ten (10) staff in the various departments was moved from MDAs on temporal basis. There is a continuous movement of staff in and out of PSEMA. No staff is employed by PSEMA. This situation is compounded by the embargo on employment by the State government for the past twelve (12) years.

This low number of staff, the high mobility of staff and lack of specialized training for those from the MDAs naturally affects the competence and capacity of the Agency in carrying out its mandate. Consequently, according to the Executive Secretary of PSEMA, *"stakeholders are usually more involved"*

6.1.5 Facilities / Equipment for DRM

According to the Executive Secretary of PSEMA, the Agency does not any facility / Equipment to conduct DRM activities. In her words,

"there is no equipment, no Ambulance, no MI CU, Raincoat, no Rain booth, etc" According to her, operations is Reflective Jacket.

6.1.6 Flood Hazard Profile

The State has not undertaken any assessment of flood hazard. However, flood hazard profile for the State was developed from responses obtained from a wide range of Stakeholders at the State Stakeholders Workshop held on 25th & 26th June 2018. Some of the information was also derived from Key Informant Interview as well as responses from Communities during Focused Group Discussion and interviews at Household levels.

6.1.7 Locations of Damaging Floods

The locations of the communities with damaging recurring floods in the State

Table 12: Communities with damaging recurring floods in Plateau State

Wase LGA	Langtang North	Shendam LGA	Mikang LGA	Jos South LGA	Jos North LGA	Jos East LGA
Guiwan Kogi		Lakushi	Baltep	Yingi	Rikkos	Fobur
Wase Tofa		Nyak	Wandam	Wit	Utan	Federe
Kogi kasa		Kalong	Kabiak	Chogopyeng,	Apata	Angware.
Ungwar sayawa		Moekat	Lalin	Rahwol kanang (Angwan Doki)	Angwan Rukuba (Nabor)	
		Shendam Town			Amanzah	
		Shimankar			Gadan Sogai	
		Bakin Kogi			Babale (Righiza Targwong)	
					Angwan Rogo	
					Angwan Rimi	

6.1.8 Other Characteristics of the Flood Hazard

Some other attributes of the Flood hazard are listed in the Table below

Table 13: Flood characteristics

Flood Attribute:	Description
Frequency of Occurrence:	Occurs yearly in recent years
Seasonality:	Usually between July and August
Causes:	Intense rainfall, Poor drainage, Blocked drainage, Building across water ways, Flooding of some major rivers into communities on the banks of the river
Magnitude:	Affects over one hundred people each year
Effects:	Usually affects Houses, Properties, Farmlands, Livestock, Business Places and Infrastructures

6.1.9 Preparedness for Disaster Incidents

The forms of preparedness for flood disaster in Plateau State include the following:

- i. Public enlightenment / Sensitization campaign on the dangers of flood hazard in collaboration with the Media; particularly Highland FM Radio Station;
- ii. Occasional visit to communities affected by flood hazard for a Town Hall meeting on issues related to flood disaster;
- iii. The State has one Shelter Camp for IDPs. It is located in Shendam LGA.

It is important to note that the State SEMA:

- i. Does not have emergency stock of medicines;

- ii. Has not conducted any simulation drill or exercise on flood mitigation;
- iii. Does not have IEC materials for communities prone to flood hazard;
- iv. Does not have Emergency toll – free number for emergency calls;
- v. There are no formal trainings on flood disaster management for any of the PSEMA staff

Given these deficiencies in PSEMA preparedness status for disaster prevention and mitigation, flood hazard could impact on any community in the State with very little assistance from PSEMA.

6.1.10 Early Warning System

When an Early Warning System (EWS) is developed and operational in any given community or region, damage and losses from flood impact will be minimal. EWS has the potential of warning people ahead of an impending hazard. It is usually desirable, therefore for all communities to have a robust EWS.

Thus, in this survey, one of the issues raised with all stakeholders is the nature and functionality of EWS for flood incidence. The consensus of opinion is that the state does not have any form of EWS. The responses include those of the Executive Secretary of PSEMA, Commissioner of Environment, Director, Ministry of Water Resources, Ministry of Environment, participants at the state stakeholder's workshop, etc. They emphasized that they do not generate EWS of their own. They however, state that any warning that comes from NIMET or NIHSA is spontaneously communicated to all communities for appropriate action.

6.1.11 Response Mechanism

PSEMA does not have the required capacity and competence to respond to flood disaster incidents. What usually happens in an event of a flood disaster include the following:

- i. Calling stakeholders meeting for a discussion on what to do;
- ii. Inform NEMA promptly;
- iii. Engage volunteers to do the much they can before external help comes;
- iv. PSEMA goes out to affected community to conduct Needs Assessment;
- v. PSEMA writes a situation report and sends a proposal to the State government for intervention. This process usually takes some time before comes.

6.1.12 Challenges

According to the Executive Secretary of PSEMA and her staff, the major challenges of DRM in the state include:

- i. Lack of competent staff;
- ii. Low level of funding;
- iii. Little of equipment required for the various aspects of DRM;
- iv. Inadequate coordination.

6.1.13 Suggestions / Way forward

In the opinion of the PSEMA Executive Secretary and her Aids, the way forward includes:

- i. Availability of funding, according to the law of 2% ecological fund to PSEMA. This will make things easier for DRM in the State;

- ii. If coordination meetings can be activated, it will enhance effectiveness in DRM;
- iii. Employing more staff with adequate training; and
- iv. Availability of necessary equipment

6.2 Community Level Assessment

Assessment at the community level was conducted mainly through the instruments of:

- i. Focused Group Discussion (FGD); and
- ii. Participatory Vulnerability and Capacity Assessment (PVCA).

FGD was conducted in two communities in the State: Rikkos and Fobur (Lat. 9 53', Long. 8 59') Communities. Each FGD was done in two sessions: Males and Females. PVCA was conducted in Kalong community, using five tools: Problem Tree, Seasonal Calendar, Historical Timeline, Venn Diagram and Community Mapping.

6.2.1 Causes, Frequency and Effects of Flooding

The main causes of flooding in these communities are:

- i. Shallow and inadequate drainage in the community;
- ii. Dumping of refuse into drainages, particularly during rainy season. They expect the rain to wash the refuse away from their homes into nearby rivers;
- iii. Building on water ways, particularly people who think that such water ways are part of their land;
- iv. The receiving rivers have become shallow due to siltation problem. As a consequence of this, the rivers are not able to evacuate the storm drainage coming from the community;
- v. Intensification of rainfall in recent times. This has made flooding more frequent in the community in recent years;
- vi. Increase in population which is creating buildings without gutters and drainages.
- vii. Overflow of rivers into adjacent communities;
- viii. Deforestation of surrounding land which is causing more surface flow and intensification of flooding.

Flood incidents in these communities have become a yearly event in recent times with disastrous consequences. Each time it occurs, buildings are destroyed, lives and properties are lost; businesses are disrupted; crops, livestock and farmlands are damaged, and, in some cases, fish farms are destroyed. In some communities, roads and bridges are also damaged.

6.2.2 Mitigation Measures by Community

In one of the communities, there is the *Rikkos Youth Development Forum* which periodically clears the drains before and during the rainy season. This is all the community can do at this point in time. Other communities do not have similar arrangement.

6.2.3 Availability of Early Warning System

The communities do not have any form of Early Warning System on flood hazard. Occasionally, however, some members of the communities receive flood warnings sent from NEMA through the State Ministry of Information.

6.2.4 Preparedness for Flood

The communities do not have any store for emergency medicine or relief materials, in the event of a flood disaster. There is no form of public enlightenment on issues related to flood hazard. They do not have emergency shelter.

Rikkos community, however, has a multi-purpose emergency response team called *First Responders* composed of about fifty (50) members. They have some form of training and basic skill for responding to some types of emergencies. They do not have equipment.

6.2.5 Response Mechanism for Flood Disaster

Rikkos Community has Emergency Response Team which participates in some rescue operations in during emergencies in the community, but not on flood disaster. They cite cases of crisis, fire, etc. In the event of an emergency, residents of the community assist themselves. External help is usually rare. Most times, the people are left to fend for themselves. Other communities do not have this kind of organization. In most cases, the local Church building or School Building is used as a temporal shelter by victims of flood hazard. The Churches provide the most assistance and are more frequent. The Local Government is next, while the State government is least.

6.2.6 Challenges hampering Flood Hazard Mitigation

The Communities state the following as their main challenges:

1. Poverty. They say they are too poor to embark on any meaningful flood mitigation project;
2. Poor enforcement of government regulation on building and environmental health. This, according to them, is the cause of inadequate drainages and dumping of refuse in public drains. They say government officials never visit their community;
3. Lack of public awareness about the danger of living in flood prone areas and some cultural practices which precipitate flood disasters;
4. There is no support from government or None-governmental Organizations in the area of DRM.

6.2.7 Needs of the Community

- a. Provision of waste disposal bins or dumpster in the community. This will discourage the habit of dumping domestic waste in public drains;
- b. Government should enforce the regulations prohibiting building on water ways;
- c. The community is desirous of a resettlement out of their present location into a more habitable location. They believe that this will not involve payment of compensations, because they are all settlers.

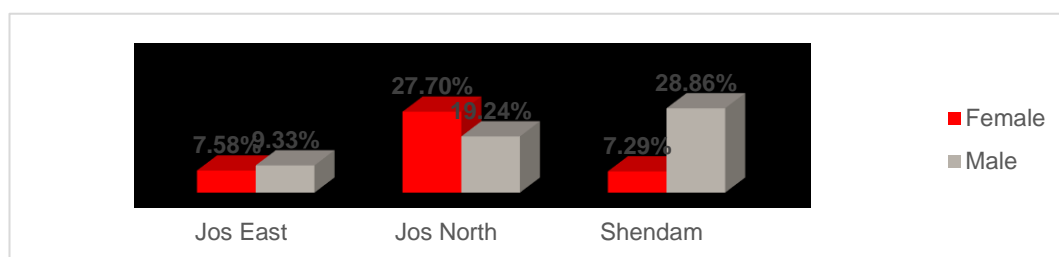
6.3 Household Level Assessment

Opinions of Households were sought in assessing the causes and effects of flood hazard in the State. Issues related to their preparedness and response to flood hazard were also raised with them. Household social and economic characteristics were also assessed to determine their various levels of vulnerabilities. Three LGAs were covered in this survey. These are Jos North, Jos East and Shendam LGAs. The responses are similar to the responses at the State and Community levels. To avoid undue repetitions, therefore, some of the responses given at this level were dropped from this report. The following represents observations made during the survey:

6.3.1 Demographic Composition of Respondents

About 17% of the respondents are from Jos East, LGA, about 50% from Jos North LGA and about 36% are from Shendam LGA (fig.31). These figures represent the proportional sample size determined for the survey. In all cases, male and female proportions of the respondents represent the cultural background of the various communities. In some case, males were more, while in some cases, female were more. In Jos East LGA, for example, there was an almost equal representation of both genders. This variation is expected to bring out the various perspectives in this issue of flood risk assessment.

Figure 31: Gender composition of respondents

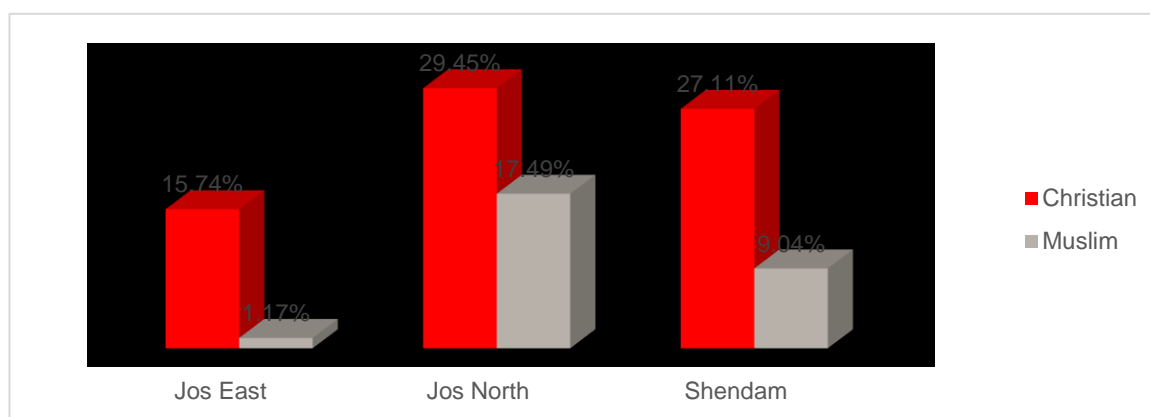


6.3.2 Religion

Information on religion of the people is needed so that humanitarian assistance can be appropriate in the event of disaster. In addition, this information will enable disaster managers obey religious laws in times of emergency.

It was observed that Christians are in majority in the three LGAs (fig. 32). However, Muslim population is also substantial. Thus, in delivering relief materials to flood disaster victims, this fact should be borne in mind. Disaster managers should also be aware that different customary laws exist in these LGAs.

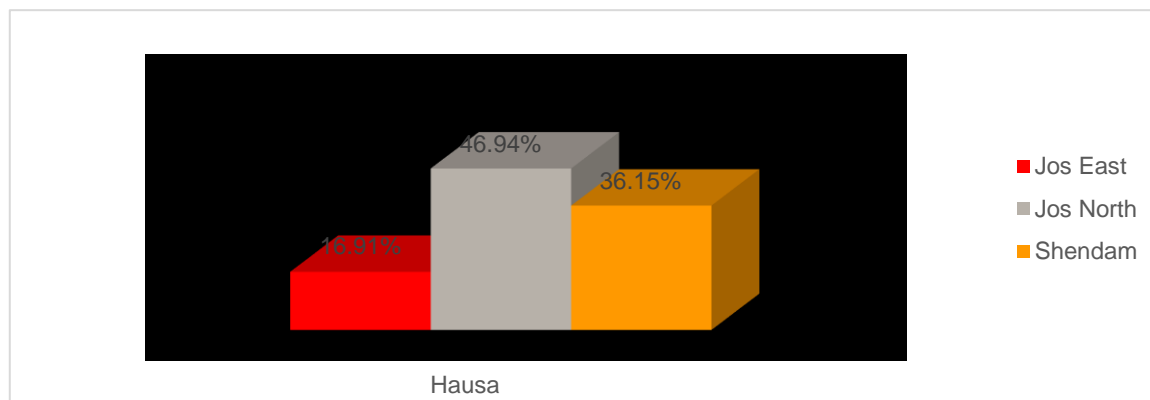
Figure 32: Religion of respondents



6.3.3 Major Languages Spoken in the State

The issue of language is important for disaster managers to know the best language in which to communicate messages related to flood hazard risks to the people. This survey shows that majority of the people speak their indigenous languages. Although, Hausa language is common to all people in the state, only a proportion of the people agree that it is their major language. Thus, in Jos East LGA, only about 17% see the language as a major language. In Jos North, it is about 47%, while in Shendam LGA, it is about 36% of the population (fig.33).

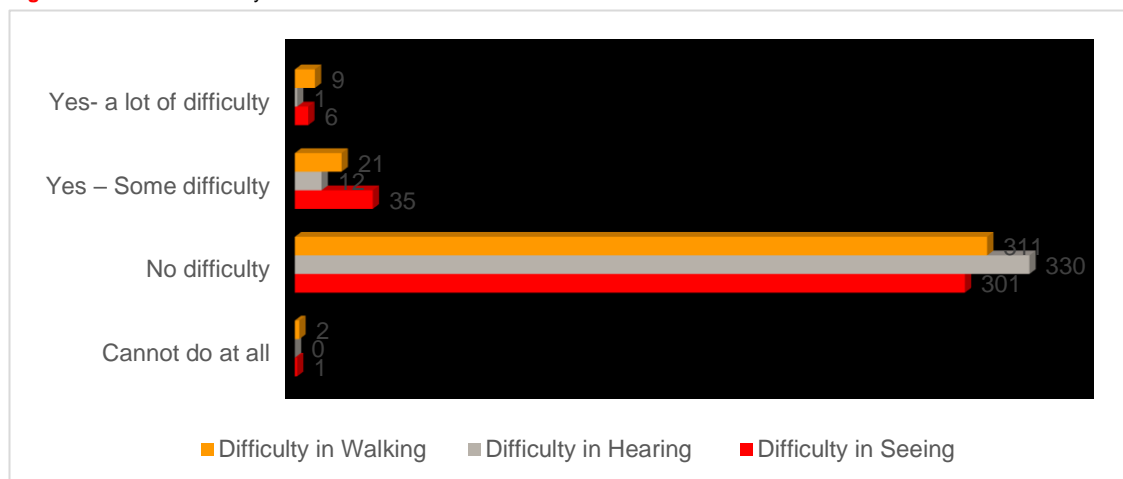
Figure 33: Common languages spoken in Plateau State



6.3.4 Level of Disability in the State

An assessment of the level and types of disabilities in a community gives disaster managers requisite information on types of humanitarian relief material to take to victims in times of emergency. Besides, it also informs disaster managers on issues related to communication methods to deploy in times of emergency. It also informs preparedness and response operations. In this survey, over 90% of the respondents indicated that they do not have any form of disability. Only a small proportion of the population agrees that they have problems with walking, hearing and seeing.

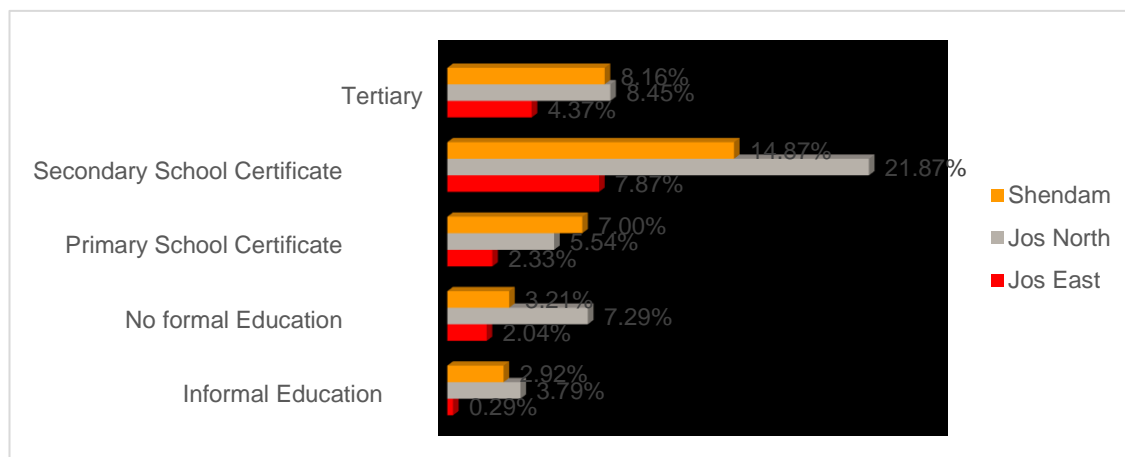
Figure 34: Level of disability in the communities



6.3.5 Level of Educational Attainment

The higher the educational attainment of an individual, the lower is his / her vulnerability to disasters. Illiteracy and ignorance are key issues of social vulnerability. In this study area, about 70% of the respondents have Secondary School and Tertiary Education Certificates (fig.35). This enables the population to communicate in English language, appreciate environmental issues and have capacity to be trained in disaster management.

Figure 35: Educational attainment of respondents

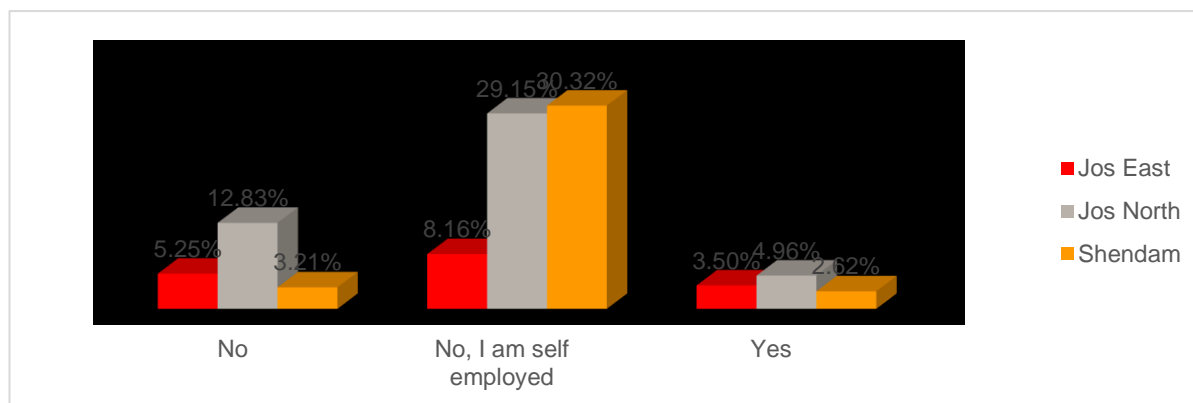


6.3.6 Status of Employment

Status and types of employment are major indices of economic vulnerability. Unemployed people are more vulnerable to disasters than employed people. Unemployed people tend towards poverty which leads to accumulation of risks and ultimately higher vulnerability. The higher the vulnerability, the higher is the disaster risk.

In this study, only about 20% of the population is unemployed (fig.36). 70% are self-employed, while 10% are employed by other organizations. This implies that the people have some form of capacity to remain resilient against the impact of flood disaster. Their income will enable them to evolve strategies for combating physical, social, economic and environmental vulnerabilities. They will be less dependent on external aid in the event of a disaster.

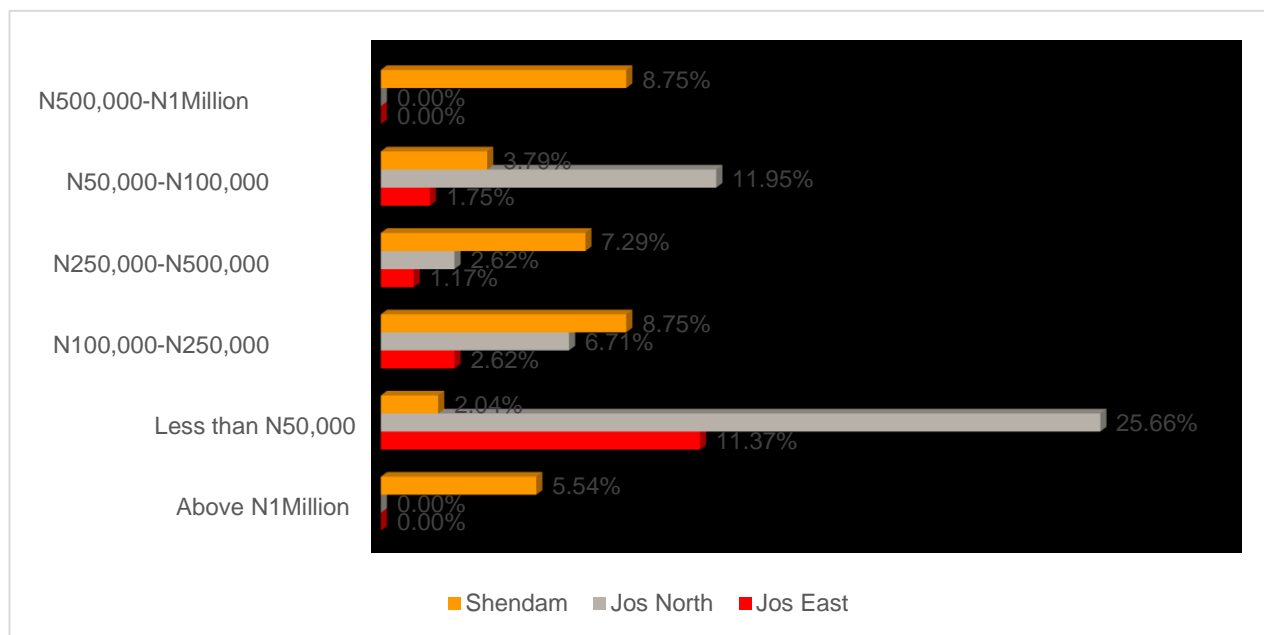
Figure 36: Employment status of respondents



6.3.7 Household Annual Income

There is a wide range in annual income earned by residents of the State. Majority of the people are in the N100,000 – N250,000 bracket. Jos North LGA is leading other LGAs in the number of people within this category. This is due mainly to the high number of high paying jobs located in this LGA.

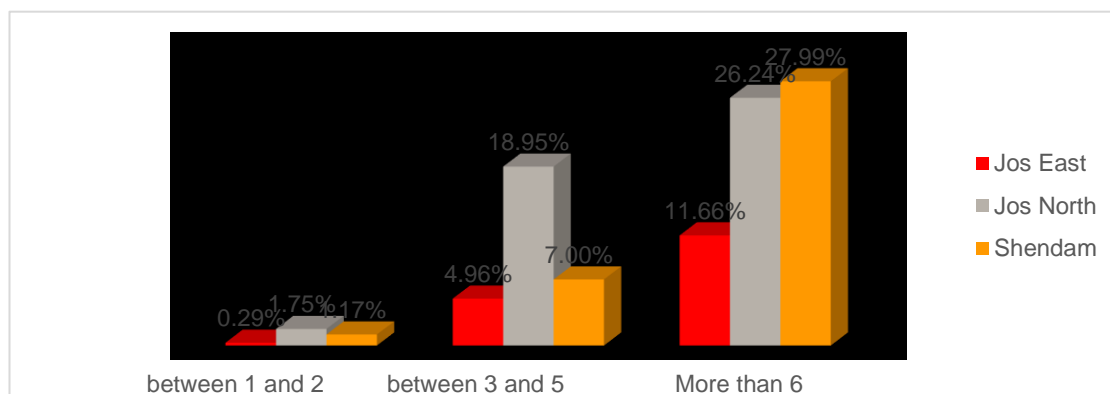
Figure 37: Annual household income of respondents



6.3.8 Size of Household

Size of household is related to vulnerability. The higher the number of persons per household, the higher is the vulnerability of the household to disaster risk. This is because; the cost of taking good care of the people will naturally be higher. In this survey, about 65% of the people have more than six (6) persons per household. This will be a great burden to the people and hence predisposed to disaster risks.

Figure 38: Household size of respondents

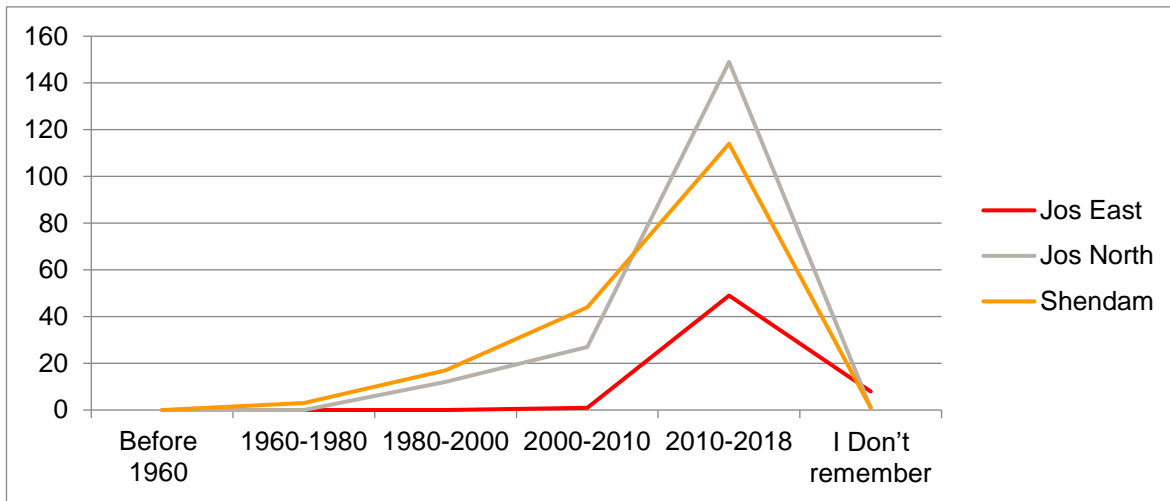


6.3.9 Historical Timeline of Flood Hazard

There is a consensus that flood incidents in Plateau State have become more frequent in recent years. Majority of the peoples believe that in the past eight (8) years, flood incidents have become very common (fig.39). This view is more popular with residents in Jos North LGA

This indicates that the forthcoming years, flooding is going to be a recurring hazard. Consequently, issues around flood disaster preparedness and response should be taken more seriously. There should be more collaboration and partnership among disaster management agencies at the three tiers of government, line MDAs, NGOs and the Community.

Figure 39: Historical flood hazard timeline in project communities

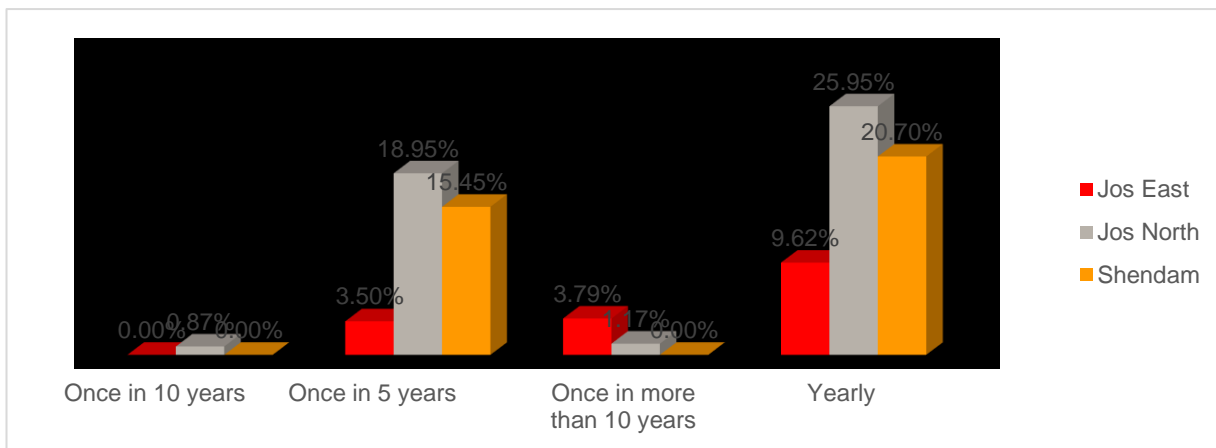


6.3.10 Frequency of Flood Occurrence

Results obtained from this survey indicate that about 60% of the respondents across the three LGAs are of the opinion that flood occurrence is a yearly phenomenon. Another 40% of the respondents agree that flood incidents occur once in 5 years. Overall, the consensus (90%) is that flood incidents occur at least once in five years.

Again, this calls for concerted efforts by disaster managers and all stake holders to be more pro-active in mitigating this hazard. A once- in- five-year devastating flood can erode all the social and economic achievements of ten years.

Figure 40: Flood frequency in project locations



6.3.11 Nature of Properties Affected by Flood Hazard

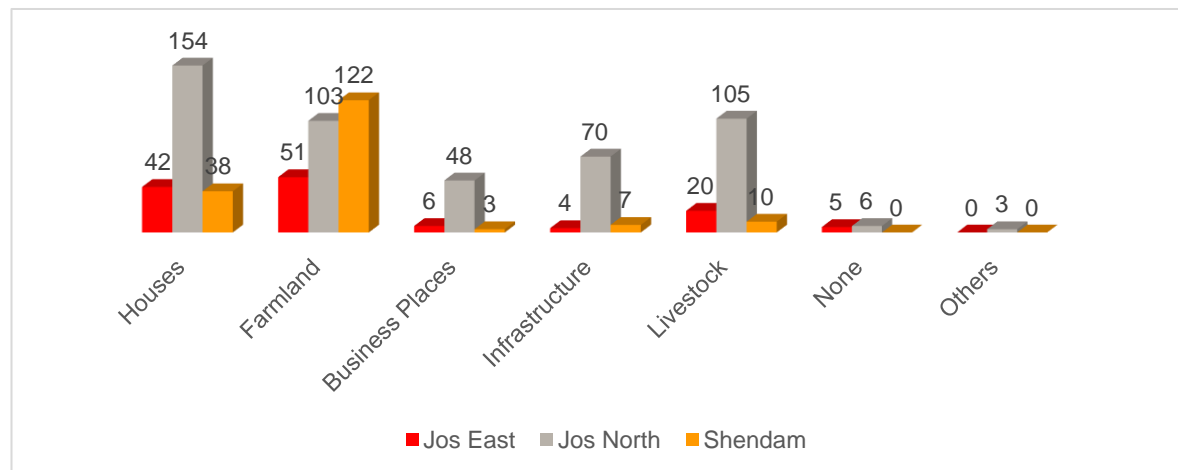
The nature of properties damaged by flood incidents is usually a reflection of the entire spectrum of human achievements which the flood hazard encounters along its path. When a community is inundated, everything submerged in the water is destroyed. Thus, in this study, the respondents chose all possible options including houses, farmlands, business places, infrastructures, livestock, etc.

The nature of properties damaged, however, depends on the location and economic activities in that location. In Jos North, LGA, for example, the major properties that are damaged are houses, business place and

infrastructure because it is predominantly an urban area (fig.41). In Shendam LGA which is predominantly, rural in nature, properties damaged are mainly farmlands.

This piece of information should be useful to disaster managers in computing damage and losses after a flood disaster incident. It will also be useful for assessing Post Disaster Needs of affected Communities.

Figure 41: Nature of properties damaged by flood

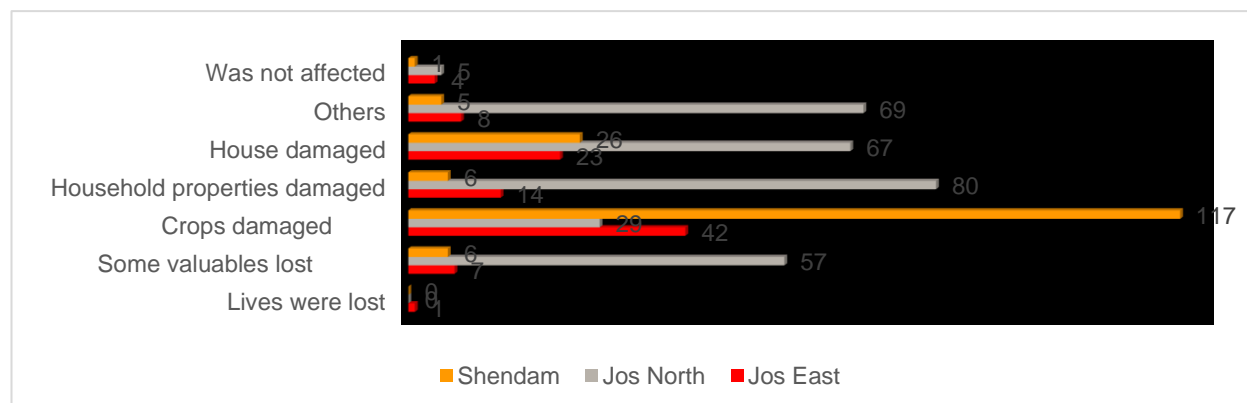


6. 3.12 Flood Effects on Households

At the household level, the types of properties damaged are also reflective of the location of the household, whether in urban area or in rural area. In Jos North LGA, for example, which is predominantly an urban area, the main items damaged are houses, household properties, household valuables, etc Whereas, in Shendam LGA which is predominantly rural in nature, properties damaged are mainly crops on farmlands (Fig.42).

This observation is also instructive to disaster managers with reference to Damage and Loss Assessment as well as Post Disaster Needs Assessment.

Figure 42: Flood effects on households

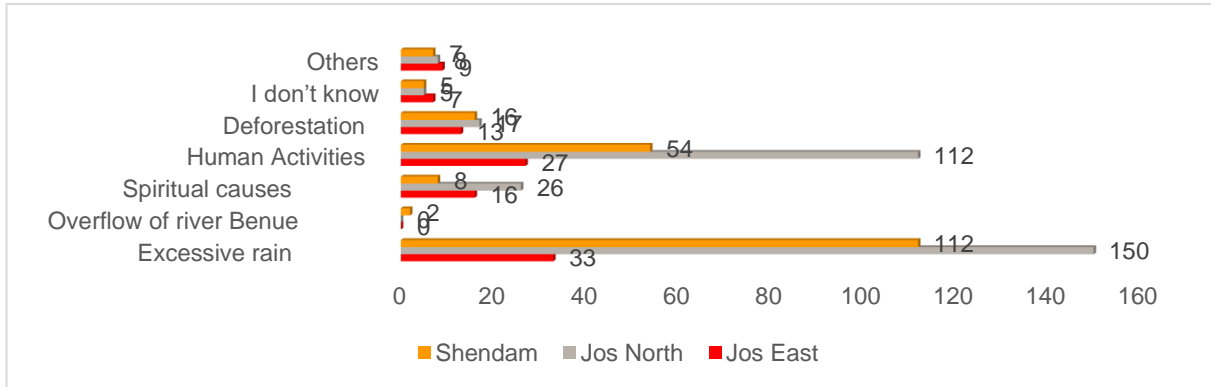


6.3.13 Causes of Flood

Responders believe that flooding is caused by a wide range of factors. However, majority of them are of the opinion that flooding in the State is mainly caused by excessive rainfall and human activities (fig.43). These

observations are in conformity with theoretical and empirical principles of flood occurrence (Gregory and Walling, 1985). This fact should inform preventive and mitigation measures.

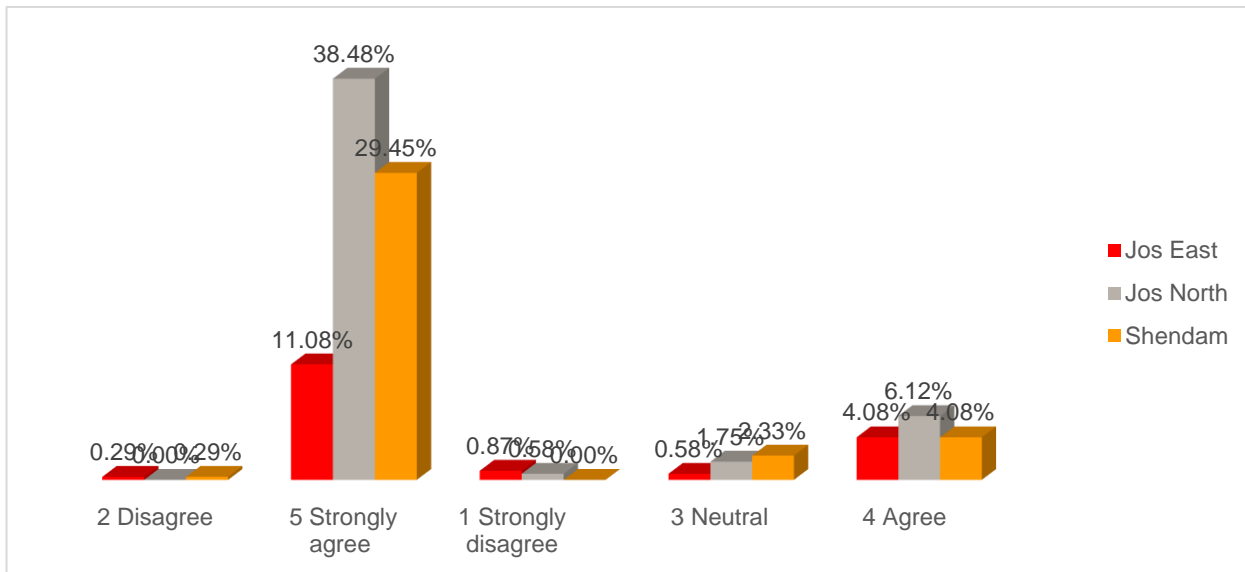
Figure 43: Causes of flooding



6.3.14 Dumping of Refuse into Drainage

One of the numerous human activities, implicated in flood occurrence is dumping of refuse in drainages. Over 80% of the responders strongly agree that this factor is a major cause of flood disaster in all communities in the three LGAs (Fig.44)

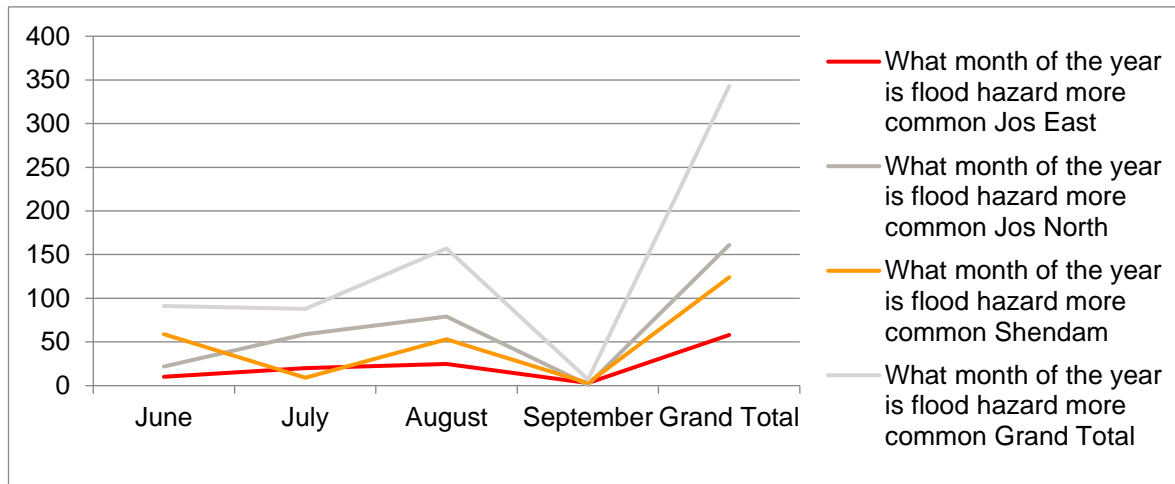
Figure 44: Dumping of refuse in drainage as a cause of flooding



6. 3. 15 Period of Flood Occurrence

Virtually all the respondents are of the opinion that flood incidents occur in the months of June, July and August across the State (fig.45). This information is important for flood disaster managers in working out strategies for prevention, mitigation, preparedness and response.

Figure 45: Period of flood occurrence

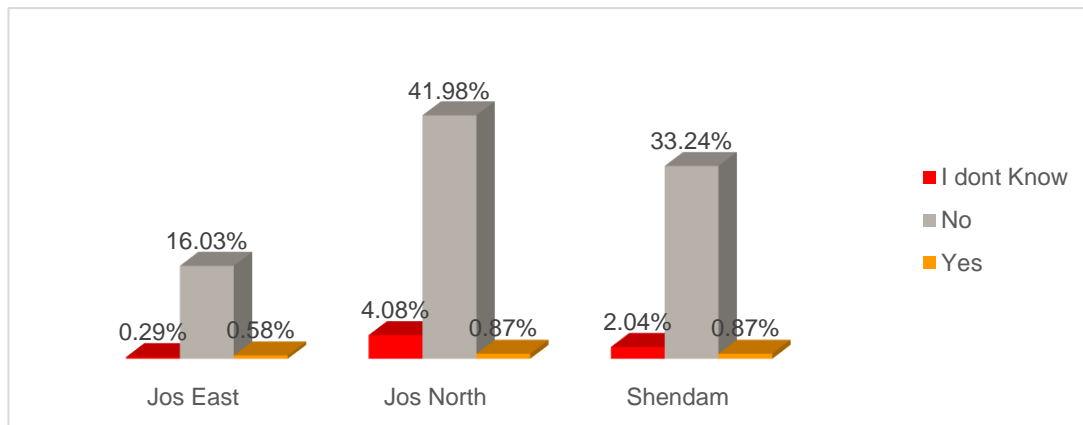


6.3.16 Previous Training on DRR

Across the three LGAs covered in this survey, the majority of opinion is that there has not been any form of training on DRR in their communities. Over 90% of the respondents made this observation (fig. 46). This implies that residents in these communities do not know what to do before or after a flood disaster. This condition further increases the vulnerability of the residents to flood disasters.

There is, therefore, the need to offer some form of DRR training to these communities in order to reduce their vulnerability to flood incidents.

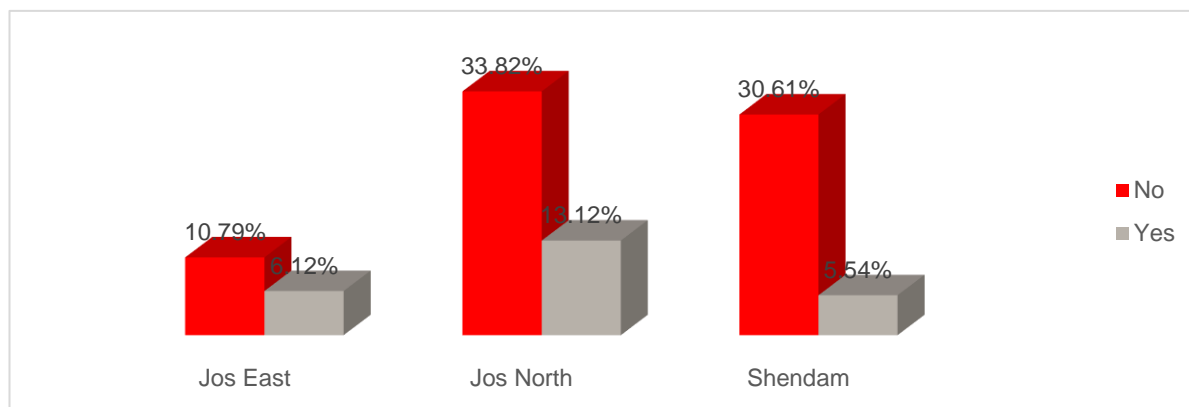
Figure 46: DRR training for households



6.3.17 Community Based EWS

About 75% of the respondents remarked that they have never heard of the word Early Warning System. Only about 25 % of the population has such knowledge (fig.47). This means that the issue of EWS is strange to the communities and most probably not available in their communities.

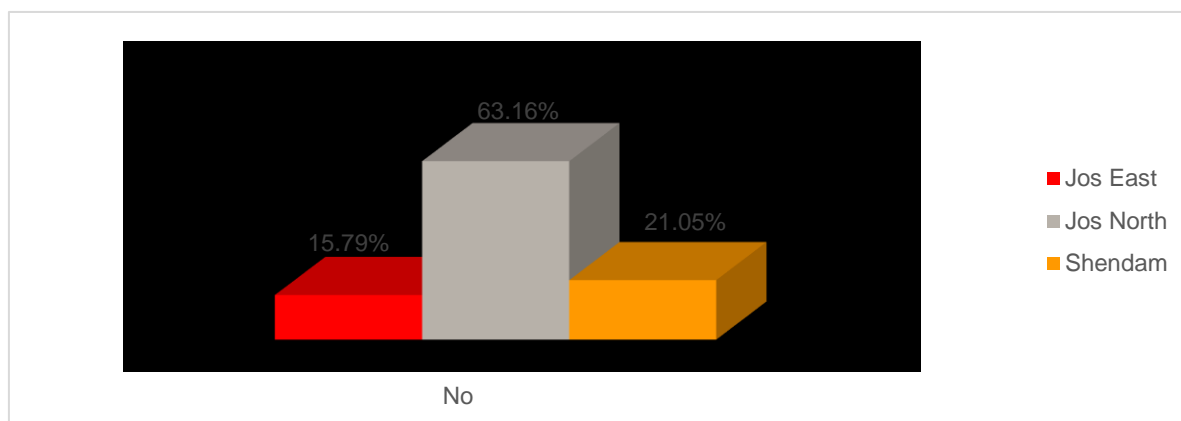
Figure 47: Early warning systems (EWS) in project communities



6.3.18 Indigenous EWS

In response to availability of indigenous EWS, virtually all the respondents indicated that there is none (fig. 48). This response is as far as the respondents know.

Figure 48: Indigenous knowledge of EWS



6.4 Conclusion

Flood incidents in the State have become an annual event, occurring mainly in the months of July, August and September with disastrous consequences. This has been the trend in the last ten years and it is most likely to intensify with the phenomenon of climate change. The flood episodes are caused mainly by high intensity rainfall and a wide range of unwholesome human activities.

This survey has clearly shown that disaster risk management at the three levels of consideration: State, Community and Household are very weak. At the State level, although there are legal and institutional frameworks for DRM, the focal point on DRM in the state (PSEMA) lacks staff, equipment, adequate funding and Policy document to effectively manage flood disasters. In addition, the state does not have an Early Warning System for flood disaster. Consequently, these deficiencies, PSEMA is incapacitated. Their response to flood emergency is poor, and very little of disaster risk prevention is done. Above all, collaboration with relevant stakeholders in DRM is poor. PSEMA appears to be mired in their shortcomings without seeing the need to reach out for assistance other than the State government.

At the community level, the situation is worse. All the communities covered in this survey appear to be waiting for the state government to come and get things done. There is no community effort, no initiative and no focus. Consequently, the communities do not have any thing on ground, as it were, to prevent, mitigate, prepare or respond to flood hazard. So, flood incidents occur freely in these communities with devastating consequences.

The situation at the household level has a good resemblance with that of the communities. There is very little knowledge of DRM at this level. Household vulnerability to flood disaster is high, their capacities are low and as a consequence, disaster risk is high.

6.5 Recommendations

Based on observations made during this survey, the following recommendations are suggested as a way of improving flood risk management in the State:

1. Additional staff should be employed trained in Plateau SEMA to enhance their efficiency. The present practice of moving staff around MDAs and PSEMA does not allow for professionalism in disaster management.
2. There should be increased funding for PSEMA for them to be able to procure essential equipment and related facilities. This certainly will improve their capability.
3. There is an urgent need to establish an Early Warning System for flood disaster monitoring and communication. This will help in reducing damage and losses from flood incidents.
4. Public enlightenment campaign should be intensified to change some cultural practices of the people which cause flooding.
5. Simulation drills should be done regularly in these communities so that people will know what to do before and during flood incidents.
6. Communities should be given some basic trainings in Emergency Response, for the communities to be able to conduct some response operations before external help comes.
7. Communities should also have a Platform for coordinating DRM. Otherwise, they will remain un focused.
8. Some emergency stock should also be made available to communities, so that flood disaster victims can have some support before external help arrive in the community.

End notes

1. EM-DAT (2012); The OFDA/CRED International Disaster Database, Universite Catholique de Louvain, Brussels, Belgium. Available at www.preventionweb.net
2. FGN (2013), Nigeria Post- Disaster Needs Assessment (PDNA) 2012 Floods. A report of the Federal Government of Nigeria
3. UNISDR (2009) Terminology of Key Disaster Terms. United Nations International Strategy for Disaster Risk Reduction, Geneva, Switzerland.

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