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Each edition of the journal has three parts. The first is devoted to original research, the second consists of field reports by conflict management practitioners and the third part is devoted to review of recently published works on peace and conflict.

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Abstract

Flood-induced Displacement are people who have been forced to leave their home or place of habitual residence as a result of the effect of flooding disasters. The frequency and intensity of flood disasters in Patigi Kwara State Nigeria is enormous and worrisome. Since 2010, at least one incident of flood will displace residents of riverine area. The objective of the study was to evaluate the socio-economic impacts of perennial flooding on the internally displaced persons in Patigi Local Government Area of Kwara State, Nigeria, anchored on Domino (Accidents) Theory propounded by W.H. Heinrich (1931). According to this theory, the disaster sequence was likened to a row of five sequences of dominoes knocking each other down in a row. The study adopted qualitative research method among its population who were mainly farmers and fishermen. Twenty-five (25) participants who Floods are a major source of human displacement, but variation in displacement levels across contexts remains poorly understood, as floods have potential to generate much higher displacement numbers in contexts of high population exposure, low level of development, non democratic governance and prevalence of armed conflict were victims of flood disasters in Patigi community, ten (10) officials of recognized NGOs, five (5) government officials and fifteen (15) flood disaster experts were purposively selected. In-depth interview technique was utilized to elicit data from the participants and content analysis was adopted. The results revealed that flooding in the area has serious implications on achieving food security. There was significant loss of farmlands, huge destruction of crops; several hectares of rice and maize farms damaged; livestock farming and fishery disrupted; and farmers who got loans from commercial banks to farm have been indebted. The loss of farmlands has worsened the level of hunger and starvation particularly among the displaced. Also, the flooding has caused homelessness as victims homes were submerged and victims displaced to camps. The study concluded that flooding in Patigi Local Government Area of Kwara State has caused adverse socio-economic implications for the affected communities. Thus, the study recommended that new settlements should be created with low-cost houses for the displaced, soft loans and financial assistance to those who lost their means of livelihoods to flood disasters; and that government should work with relevant agencies for dredging of the river for sustainable protection.

Keywords: Flood; Flood-Induced; Displacement; Displacement.

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In Nigeria, floods and their consequences are becoming too frequent and a threat to sustainable development in human settlements, (Aderogba, 2012) noted that it is one of the environmental challenges in the country and that Nigeria is endowed with enormous water resources and the spate of flooding and water stress in Nigeria is high. Many states in Nigeria are increasingly experiencing flooding during the rainy season. Flooding is prevalent in the Niger-Delta region and Southern parts of the country as well as riverine communities, Agbonkhese, Agbonkhese, Aka, Joe-Abaya, & Adekunle, (2014). Nigeria suffered the worst flooding experience in 2012 (Nkeki, Henah, & Ojeh, 2013; OCHA, 2012; Toure, 2014). Relief Web (2024) noted that the socio-economic impact of floods in Nigeria has been colossal. In 2012 more than 2.3 million people were displaced, 363 lost their lives and 16 million people were impacted in various ways.

The available evidence suggests that the country lost about US\$16.9 billion to flooding in 2013 (Security, 2013). The economic value of the loss was over US\$16.9 billion. Again, ten years later in 2022, another major flood led to the loss of 600 lives, also, 3.2 million people were affected across 34 of the 36 states of the federation and the Federal Capital Territory (Reliefweb, 2024). The Nigeria Bureau of Statistics in 2023 reported the devastating impact of the 2022 flood to be in the range of US\$3.79 billion to \$9.12 billion, with the best (median) estimate at \$6.68 billion and that the economic value of the agricultural-related losses due to the 2022 floods was about N700 billion.

According to Reliefweb (2024), agricultural lands, crops, infrastructure, and rural livelihood continue to be destroyed almost annually. Past efforts to mitigate flood risks in Nigeria from prevention to preparedness, have often been hampered by poor coordination, inadequate resources, and lack of cutting-edge tools, limited platform to integrate relevant data where such needed data were available.

Extreme rainfall is a major cause of flood worldwide including Nigeria. Aja and Olaore, (2014) noted that the increasing level of flooding in Nigeria is caused by high volume of rainfall as a result of climate change. The identified characteristics of extreme rainfall that are associated with flood frequency in Nigeria include duration, intensity, frequency, seasonality, variability, trend and fluctuation. Echendu (2020:1) stressed that "Nigeria's flooding is mainly human induced with current poor urban planning practices and inadequate to non-existent environmental infrastructure contributing to and exacerbating the issue." Similarly, Oladokun and Proverbs (2016) argued that the lack of a national Flood Risk Management (FRM) strategy as well as absence of comprehensive flood risk maps are some of the contributors to incessant flooding problem in Nigeria.

Flooding causes displacements, losses and fatalities (Cirella and Iyalomhe, 2018). Sustainable socio-economic development is hampered by flooding in the country and flooding adversely affect socio-economic stability and sustainability as it impacts economy, social life, environment and health. In Kwara State Nigeria, Patigi Local Government Area is one of the LGAs that are flood-prone because of its geographical location, which is surrounded by a large River (Bariweni, 2012). The area is flood-prone because of the saturated nature being a wetland and compounded by the general rise in the sea level as a result of global warming. Also, floods occur in many communities in Patigi because of the presence of a large River, especially when there is an excess rainfall, causing the river to overflow. While the overflow of a River may be beneficial as organic materials are deposited which can improve the land/soil quality, however, the overflow has a number of adverse consequences on the socio-economic life of the affected people. For instance, flooding disasters in many communities in Patigi Local Government Area had claimed many lives, caused large-scale displacement of people and destroyed properties worth millions of naira. It has also destroyed both built-up environment and underdeveloped plans. Therefore, this study aimed to investigate the causes of flooding and its socio-economic implications in Patigi communities.

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In Kwara State Nigeria, Patigi Local Government Area is one of the LGAs that are flood-prone because of its geographical location, which is surrounded by a large River (Bariweni, 2012). The area is flood-prone because of the saturated nature being a wetland and compounded by the general rise in the sea level as a result of global warming. Also, floods occur in many communities in Patigi because of the presence of a large River, especially when there is an excess rainfall, causing the river to overflow. While the overflow of a River may be beneficial as organic materials are deposited which can improve the land/soil quality, however, the overflow has a number of adverse consequences on the socio-economic life of the affected people. For instance, flooding disasters in many communities in Patigi Local Government Area had claimed many lives, caused large-scale displacement of people and destroyed properties worth millions of naira. It has also destroyed both built-up environment and underdeveloped plans. Therefore, this study aimed to investigate the causes of flooding and its socio-economic implications in Patigi communities.

Conceptual Clarifications

Flood: This is an overflow of a large amount of water beyond its normal limits, especially over what is normally dry land. Flood is a natural consequence of stream flow in a continually changing environment, it is usually caused by intense or prolonged rainfall. Flooding occurs in Nigeria in three main forms which are: river flooding, urban flooding and coastal flooding. A flood happens when water overflows or soaks land that is normally dry. Generally, floods take hours or even days to develop, giving residents time to prepare or evacuate. Sometimes, floods

develop quickly and with little warning.

A flood can develop in many ways. The most common is when rivers or streams overflow their banks. These floods are called riverine floods. Heavy rain, a broken dam or levee, rapid ice melt in the mountains, or even a beaver dam in a vulnerable spot can overwhelm a river and send it spreading over nearby land. The land surrounding a river is called a flood plain (National Geographic, 2024).

Flood-Induced Displacement

Flood-induced persons are those persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of flooding activities, armed conflict situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized State border (UNHCR 2024). Flood-induced displaced persons have not, unlike refugees, crossed an international border for the sake of safety but have remained in their home country. Consequently, flood-induced displaced persons become tremendously vulnerable as they maintain their rights as citizens and protection of their government even though the government could have been involved in what caused the displacement in the first place (Kussa 2019). Being internally displaced means that one is still under the jurisdiction of one's government and hence cannot claim rights beyond those of their fellow countrymen. Internal displacement can be caused by natural disasters (famine, flood, and drought), conflict (war and ethnic violence), violation of human rights and development induced displacement.

According to Muhammed (2017), Nigeria has grappled with flood-induced internal displacement and forced migration mostly due to conflict triggered by ethno-religious communal disputes, a civil war in 1967, and

other man-made and natural disasters. Since 2013, the country has experienced an unprecedented amount of internal displacement due to the insurgency in the northeast, Muhammed (2017). The country is currently placed as one of the top ten countries with the highest number of flood-induced persons due to conflict more than in any other African country; ranking fifth with an estimated over 700,000 in 2015 alone (Muhammed, 2017).

Statement of the Problem.

Flooding is one of the man-made disasters that have adversely impacted socio-economic life of the people. Flooding worsens existing poverty and poverty makes the impact of flooding much more severe by increasing vulnerability (Echendu, 2020). Studies revealed that flooding causes hunger because it affects the food and agricultural sector (Osabuohien, Osabuohien, & Urhie, 2018). During flooding, farmlands are washed away thereby leading to food insecurity and escalating hunger. Flooding hampers access to adequate, clean, accessible, and cheap water for both domestic and personal use as well as good sanitation (Echendu, 2020). Flooding pollutes the water thereby denying the rights of the people access to adequate, clean, accessible, and cheap water. Also, it damages sanitation facilities. Based on the existing figures, about 63 million people do not have access to potable water and about 100 million people do not have access to basic sanitation amenities in Nigeria (Raimi, Vivien, Odipe, & Owobi, 2018). About 80 percent of diseases are associated with poor hygiene and unsafe water (Raimi et al. 2018).

The frequency and intensity of flood disasters in Patigi is enormous and worrisome. Since 2010, at least one incident of flood occur every year. The rising cases of flood disaster in Patigi area have compounded the humanitarian crises in the area as many residents are displaced. The humanitarian crises range from loss of shelter

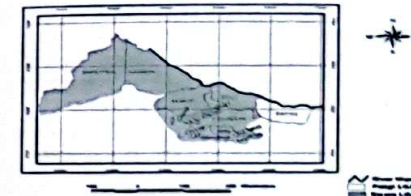
to loss of means of livelihoods and various socio-economic needs. While there are interesting studies on the flood-induced displacement in other climes, there is dearth of study on flood-induced displacement in Kwara State Nigeria. Therefore, this study examined flood-induced displacement in Patigi Local Government, Kwara State and its socio-economic impact on the Patigi communities.

Scope of the Study

This study is limited to socio-economic impacts of flooding on flood-induced persons in Patigi Local Government Area of Kwara State. The socio-economic impacts are measured by the extent at which flooding in the area causes poverty, destruction of means of livelihoods, hunger, and destruction of property and among others to the internally displaced people in the study communities between 2010 and 2021.

Study Area

Figure 1: A Map of Kwara of State showing Patigi LGA.



Source: Kwara State Ministry of Land and Housing, 1999. https://www.researchgate.net/figure/Map-of-Kwara-State-showing-Patigi-LGA-Source-Kwara-State-Ministry-of-Land-and-Housing_fig1_308079047

Patigi is a town in Kwara State. The town is the headquarters of Patigi Local Government and the Patigi Emirate. It is inhabited by the Nupe people who also exhibit a linguistic repertoire of the Yoruba dialect. They are farmers, aquatic sellers/fishers and traders. Patigi is a Nupe town along the banks of the Niger River. The township is located within Patigi Local Government Area. The local government is one of the largest Fadama lowlands in the state with River Niger as the primary source of water. The

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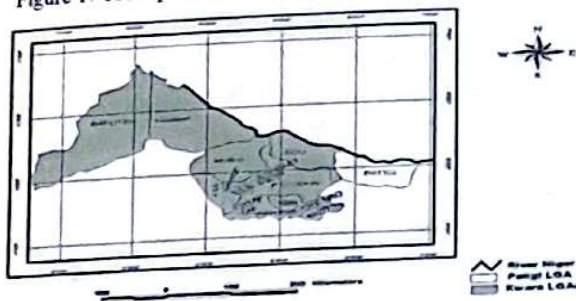
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Nupe people of Patigi are majorly farmers-harvesting cassava, millet, rice, guinea, corn, melon. They also make a lot of local snacks such as "efan", "gbankuru", "lialia", "Kuli-Kuli", "dankuwa", "banbara", "alewa" etc. The people of Patigi also engage in fishing. They are also very industrious. The settlement of Patigi had existed before the founding of Patigi Emirate but the growth and importance of Patigi grew as a result of the movement of the Edegi ruling house from Gbara and Bida to Patigi forming a new emirate. Also the total population of Patigi based on 2016's population projection census is 149,600 (National Population census, 2006). Its total land area is 33,433km² (National Population Census, 2006).its population density is 95.50/km² (National Population Census, 2006).

Theoretical Framework:

The Domino Theory

This study adopted Domino theory propounded by W.H. Heinrich (1931). According to Heinrich, 88% of all accidents are caused by unsafe acts of people, 10% by unsafe actions and 2% by "acts of God". Accidents are defined as unplanned occurrences which result in injuries, fatalities, loss of production or damage to property and assets (ILOEncyclopaedia, 2015).

Preventing accidents is extremely difficult in the absence of an understanding of the causes of accidents. Many attempts have been made to develop a prediction theory of accident causation, but so far none has been universally accepted as accident causation which will help to identify, isolate and ultimately remove the factors that contribute to or cause accidents. Heinrich noted that sometimes it could be Multiple causation theory which postulates that for a single accident there may be many contributory factors, causes and sub-causes, and that certain combinations of these give rise to accidents, the contributory factors could be behavioural and environmental.

Heinrich proposed a "five-factor accident sequence" in which each factor would actuate the next step in the manner of toppling

dominoes lined up in a row. According to this theory, the disaster sequence was likened to a row of dominoes knocking each other down in a row. There are five sequences relating same to this study. These are:

1. Social environment (flood-induced displaced persons in Patigi)
2. Accident (fault of the person or government)
3. Unsafe act (poorly constructed dam, nature of the flood-induced displacement camp)
4. Disaster (flooding)
5. Injury (loss of livelihood, poverty)

Therefore, it suggests that disaster can be avoided according to Heinrich by removing one of the dominoes, normally the middle one or unsafe act. This theory implies that flood disasters are caused mainly as a result of human factors and if that cause can be identified and removed, the flood disaster will not be repeated. This theory shows that flood disaster occurs as a result of more than one factors and the last domino (injury loss of farmland, houses, fishing and other socio-economic losses in Patigi) occur as a result of the completed sequence of other factors.

Causes of Flooding in Nigeria

Flooding is the most common environmental hazard in Nigeria. Scholars have pointed out different causes of flooding. One of the causes of flooding in Nigeria is climate change. It was found that climate change has increased the amount of rainfalls than before. Aderogba (2012) noted that flooding is a consequence of human-nature interactions. Lack of or poorly planned drainage systems was identified by (Ogundele and Jegede, 2011) as another cause of flooding, including population growth and urbanization. According to Adeoye (2009), these factors are not independent of one another and flooding normally occurs as a result of a combination of one or more of these factors.

Terminiski (2013) distinguishes four root causes, which he calls the dominant classification of internal displacement being conflict-induced, environmentally induced, disaster-induced and development-induced internal displacement. Also, government policies and systematic human rights violations

are also causes of internal displacement.

According to Etuonovbe (2011) flooding in Nigeria could be as a result of natural cause or human cause. The author categorized the causes as follows:

Natural causes

- a. Heavy rainfall
- b. Oceans storms and tidal waves usually along the coast.
- c. Lack of Lakes
- d. Silting

Human causes

While other human causes of flooding in Nigeria may be due to one of the following factors;

- a. Burst water from main pipes
- b. Dam failures
- c. Population pressure (especially in the city of Lagos)
- d. Deforestation (such as North part of Nigeria).

Socio-Economic Impact of Flooding on Flood-induced Persons

Flooding is one of the man-made disasters that has adversely impacted socio-economic life of the people. It has been found that flooding is caused by poverty and poverty is a consequence of flooding (Roy, Tschakert, Waisman, Halim, Antwi-Agyei, Dasgupta, Okereke, 2018: 450). In other words, flooding worsens existing poverty and poverty makes the impact of flooding much more severe by increasing vulnerability. It affects the poor by decreasing their living standards and impeding their economic progress and development (Dube, Mtapuri, & Matunhu, 2018). Socio-economic impacts of flooding include loss of human life, damage to property, destruction of crops, loss of livestock, non-functioning of infrastructure facilities, deterioration of health condition owing to waterborne diseases. Vu, Cassells and Holland (2014), conducted a study titled "economic impact upon agricultural production from extreme flood events in Quang Nam, Central Vietnam". The authors found that since the most productive agricultural land is concentrated along the low

dying sections of river systems, losses to agriculture in extreme flooding can be significant.

Bankof (2003) in his study titled, "Constructing vulnerability: the historical, natural and social generation of flooding in metropolitan Manila" found that a whole range of socio-economic factors such as land-use practices, living standards, and policy responses are increasingly influencing the frequency of natural hazards such as floods and the corresponding occurrence of disasters. Adeoye et al., (2009) found that though precise statistics are not available regarding the losses sustained by the urban dwellers, available records showed that more than one million people have been rendered homeless across the country while properties worth billions of Naira have been destroyed in their study titled "Climate change and menace of floods in Nigerian cities: socio-economic implications" Otomofa, and Obienusi. (2015) conducted a study titled, "evaluation of the impacts of flooding on socio-economic activities in Oleh, Isoko South Local Government Area, Delta State" The hypothesis revealed that flooding has a significant relationship with socio-economic activities in Oleh. In addition, the loss of potable water and agricultural products was revealed as some of the negative impacts of flooding in the study area.

According to Eni, Atu, Oko, Ekwok, (2011) flooding has significant impacts on global and regional food production particularly the common staple food crops performance in tropical sub-humid climatic zone in a study titled "flood and its impact on farmlands in Itigidi, Abi Local Government Area, Cross River State, Nigeria," however, the type of flooding predominant in the study area is flooding caused by heavy rainfall and over flow of river banks.

Further, displaced people are faced with overcrowded conditions in camps with children being the most vulnerable. This is because they are faced with myriad of challenges such as poor nutrition, breakdown of health infrastructure, disease epidemics, looting and violence. Others include unprotected sex

especially when separated from their families; displaced persons are prey to a host of diseases, most of which could be prevented. Amoo, Smith, Ujah, and Oladele, (2018) in a study titled "socio economic and health challenges of internally-displaced persons as a result of 2012 flooding in Nigeria". Flooding disrupts the social capital of the people, damage their physical environment (especially farms) and erode their little savings leading to hunger. During flooding, farmlands are washed away thereby leading to food insecurity and escalating hunger. The impact of flooding on hunger and food security has made Nigeria to be exporting food from other countries despite the fact that the country is blessed with arable and highly fertile land. For instance, the study of Musa and Shabu (2019) revealed that over 35 percent and 42 percent of the vegetation cover and 56 percent and 51 percent of arable farmlands were affected by floods in 2012 and 2014 respectively in Adamawa state, Nigeria. According to Echendu (2020:7):

The poorer rural farming communities suffer more not only because they lose income, but they also lack the cash to purchase other food and non-food items they need. Inundated farmlands are unsuitable for cultivation and livestock are not spared during floods.

Flooding has also been found to impact health and well-being of people (Olanrewaju, Chitakira, Olanrewaju, & Louw, 2019). Flooding has both direct and indirect consequences on health. As noted by Echendu (2020), Nigeria's health sector is challenged as a result of incessant flooding with its attendant consequences on health. For instance, existing studies showed that water-borne diseases such as Typhoid, Cholera, and Dysentery are frequent during flooding (Okaka and Odhiambo, 2018). Malaria is also common because floods breed parasite such as mosquitoes which cause malaria infection. Flooded households breed mildews and molds, and stimulate upper respiratory illnesses for people who have allergies and episodes for asthma patients. This mostly affects the elderly and children (Echendu, 2020). Power outage is

likely to be resulted during floods and post-floods, and this may force people to resort to the use of fossil fuel-powered generators.

Tong (2017) has noted that mental health problems such as post-traumatic stress disorders, anxiety, depression, and even behavioral shifts like aggression, sleeplessness, anger, hyperactivity, and suicide are common among flood victims.

Flooding also has impacts on quality of education. While the importance of quality education has been emphasized for children, flooding undermines the right of children to education (Mudavanhu, 2014). Children in areas where flooding is rampant are likely to be educationally disadvantaged as their classrooms may have been filled up with floods or roads to schools may have become flooded. Their lack of access to quality education due to persistent flooding at their crucial stages in life could affect them in the future (Erica, Jessie, & Stephanie, 2018). Parents and guardians are scared of sending their children to schools during flooding because they feel that it is dangerous and unsafe. As reported by Echendu (2020: 6)

Flooding disrupts the schooling of children and the delivery of education in many ways, no matter the severity of the flooding. Even in non-major floods, parents are not keen to send their children to school as they fear them treading dangerous flood waters en-route to schools.

Studies from Nigeria revealed that the role of schools changes during flooding changing from center of learning to serving as emergency shelters during flooding. This adverse impact of flooding will be more destructive in areas/communities where access to quality education is already inadequate.

In most disadvantaged communities, there is often delay in the reconstruction of flooded schools. This becomes more damaging when flooding occurs every year. On the other hand, the effects of flooding on the poor families are severe as it can force them to withdraw their

children from school and make them enter into the labour market to work to augment the households' income (Kousky, 2016).

Methodology

Both primary and secondary sources of data were utilised in this study. Primary data were obtained through interviews where participants were interviewed based on the research questions. On the other hand, secondary data were obtained from official records. Both sources were used to complement each other. The study adopted qualitative research design. purposive sampling was used to select respondents. twenty-five (25) participants who are victims of flood disasters in Patigi community, ten (10) officials of recognized NGOs, five (5) officials of government, fifteen (15) flood disaster experts, 40 victims of flood disasters in Patigi were purposively selected. The researchers personally visited the flood-induced displacement camp and interviews were conducted in indigenous language with the help of an interpreter since Nupe is the dominant language in the study community. After each interview session, researcher transcribed each response and translated from Nupe language to English language. Responses were obtained freely from respondents who were happy to share their experiences, hoping that government may use the research findings for intervention in the communities.

Data Presentation and Analysis

Causes and Prevalence of Flooding in Patigi Local Government

Over 80 percent of the experts explained that flood is an overflow of large body of water over the land surfaces. One expert noted that

flood is caused by rising sea level as a result of rising global temperature which culminates into heavy downpour. It is one of the consequences of global climate change. He added that "only a River separates Patigi community from Niger State. The ravaging floods from Rivers Niger and Kaduna joining by flood from heavy torrential downpour

and overflow of Jebba dam have been found to be the cause of the floods in the community. (Mr. Akogun, 61-year-old Expert, Ilorin).

Another expert explained that:

flood is common in Patigi community because it is a low-land community. So, floods from Niger River and Kaduna River as well as overflow of Jebba dam usually cause heavy flood in Patigi community ... Also, it is caused by excess rainfall. (Prof. Ifabiyi, 56-year-old Expert, University of Ilorin).

Another expert expressed that:

flood is prominent nowadays because of large-scale global climate change which has been culminating into high level of rainfall (Dr. Usman, 49-year-old Expert, University of Ilorin).

Also, another expert stressed that

the construction of dam upstream is the leading cause of the recurring floods in Patigi. As you know, Patigi is a low-lying area. Even without the construction of dam upstream, flood would still happen; but not to the level it occurs. (Mr. Abdulkareem, 54-year-old Expert, Ilorin).

One resident corroborated this when he said that:

The construction of dam upstream worsens the pace of floods in our community. Before the construction, we knew how to manage the flood; we knew the level it would reach; we knew how to control and tame it; we knew the breed of rice to plant. (Alhaji Aliyu, 42-year-old Participant, Patigi).

A fisherman narrated that:
the flood destroyed our occupation

... We were forced to become farmers because we need to find another means of livelihoods. Even when we started engaging in farming, floods destroyed all our crops and washed away our farmlands. I left with nothing now as I am speaking to you. (Mallam Salisu, 49-year-old Fisherman Patigi).

Furthermore, a community leader expressed that:

The flood becomes recurrent because River Kaduna has a confluence of River Niger in our community. This is really affecting us. Many of my subjects have left the community against their wish because of the lingering and destructive floods. (Alhaji Garuba, 78-year-old Community Leader, Patigi).

From the grey literature, "the Nigeria Hydrological Services Agency (NIHSA) had earlier warned that the current water level in the Middle Niger of the Niger Basin portends some level of concern for Nigeria as there could be a likelihood of river flooding in the State contiguous to River Niger. (Allafrica.com; Nigeria: Food Security Threatened as Floods Destroy Farm).

From the above, the study deduced that the flood results from the linkage of Rivers Niger and Kaduna as well as Jebba dam with the Patigi community. Flood disaster is likely to be resulted whenever there is overflow of Jebba dam. Communities in Patigi were greatly affected because of the low-land nature and structure of them. Also, the analysis revealed that large-scale climate change sweeping the entire world has been implicated to have caused floods in Patigi area. It is found that climate change has caused significant rise in torrential downpours. The analysis also revealed that the dredging of Rivers Niger and Kaduna would mitigate the level of flood disaster in Patigi area.

Socio-economic Impacts of Flooding in Patigi Local Government

Narratives of participants on the socio-economic impacts of flooding in Patigi Local Government Area of Kwara State Nigeria are nuanced and the narratives are presented below.

Flood and Loss of Farmlands

About 87 percent of the participants noted that floods in Patigi has caused loss of life, destruction of property, damage crops and death of livestock, destruction of basic infrastructural facilities, causing waterborne diseases, among others.

One displaced farmer stressed that he was severely affected by the floods because his farms were located very close to the River. According to him, he deliberately established his farms beside the River for easy irrigation during the dry season. He expressed that:

my farms located near the River were washed away ... I left with nothing now. Everything was lost. I established my farms close to the River because I felt that it would be easy for me to irrigate during the dry season. I never envisaged that floods would affect my farms to that extent. (Mallam Muhammed, 47-year-old Participant, Patigi, Farmer).

Another displaced farmer in Patigi expressed that his rice farms were seriously affected. According to him;

you know, rice farms are usually established close to the River. That was why I did that so that there would be adequate supply of water. Rice cannot germinate or survive on a dry land or in a place where there is no adequate supply of water ... When the flood started; everything was lost within two days of that particular flood. (Mr. Nasiru, 53-year-old Participant, Gbaradogi, Farmer).

The researchers observed that most of the farms washed away by the flood were located very close to the flood plains.

One expert noted that floods are major impediment to agriculture and food security. According to him: "many farmlands were affected especially rice and maize farms. This could lead to hike in the prices of food items in the market" (Mr. Jemeel, 36-year-old Expert, Ilorin).

An economist stressed that "the prices of rice and maize have been increasing as a result of persistent floods" (Dr. Yakubu, 41-year-old Expert, Ilorin).

A victim narrated that:

flood washed away about six hectares of my rice farm and four hectares of my maize farm ... I obtained loan from a commercial bank and used the loan to invest on the farm. Paying back the loan would be difficult for me. Where would I get the money to repay the loan? I am using this opportunity to seek assistance from government so as to repay my loan. (Mr. Sanni, 44-year-old Farmer, Ilorin).

Another participant explained that "we are gradually heading to serious food crisis if nothing is done to address flood disaster in Kwara State" (Mr. Jemeel, 36-year-old Expert, Ilorin).

From the above, the researchers deduced that floods in Patigi community has caused significant loss of farmlands and destroyed many crops. The analysis revealed that many hectares of rice and maize farms were washed away by flood. Also, livestock farming and fishery were also disrupted. This development has serious implications on achieving food security in Patigi Local Government. The loss of farmlands has worsened the level of hunger and starvation especially those who had been displaced. The displaced farmers and fishermen were complaining that the relief materials from the State Government have not been adequate, and even National Emergency Management

Agency has not been responsive to their needs.

Major Findings of the Study

The study found that causes of the flood results from the linkage of Rivers Niger and Kaduna as well as Jebba dam with the Patigi community. Flood disaster is likely to be resulted whenever there is overflow of Jebba dam. Communities in Patigi were greatly affected because of the low-land nature and structure of them. Also, the analysis revealed that large-scale climate change sweeping the entire world has been implicated to have caused floods in Patigi area. It is found that climate change has caused significant rise in torrential downpours. The analysis also revealed that the dredging of Rivers Niger and Kaduna would mitigate the level of flood disaster in Patigi area.

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Discussion of Key Findings

The aim of this study was to examine flood-induced displacement in Patigi Local Government Area of Kwara State. The analysis indicated that before the flood disaster, most households were living a modest life. After the flood, they lost almost all their means of subsistence. Most of them in camps rely on food items and other aid materials from the government at all levels and its relevant agencies as well as the NGOs to survive. Flooding is one of the man-made disasters that have adversely impacted socio-economic life of the people. As cases of flooding increase, the level of poverty is rising as farms of poor and subsistent farmers are destroyed by flooding. It disrupts the social capital of the people, damage

their physical environment (especially farms) and erode their little savings of the poor households. This agrees with the findings of Echendu (2020) that flooding worsens existing poverty and poverty makes the impact of flooding much more severe by increasing vulnerability.

Conclusion

Based on the findings, the study concludes that flooding in Patigi Local Government Area of Kwara State has caused adverse socio-economic implications for the affected communities. For instance, it has disrupted means of livelihoods of most of the people in the affected communities such as farmers, fishermen among others. This has further pauperized most of the households in the area, and they have to rely on the relief materials from Kwara State Government, the National Emergency Management Agency (NEMA) and other relevant agencies, NGOs and other critical stakeholders. However, most of the victims are complaining that government has not been doing enough to address the socio-economic challenges that the flooding has caused them. They stressed that the relief materials are not adequate and not regular. The demand for compensation or soft loans for those people who lost their means of livelihoods has not been provided. The requests for the relocation of the people of the affected communities to upland areas with permanent settlements and low-cost houses have not yielded any results. Government seems paying lip-service to the socio-economic conditions of the victims of floods in the affected communities.

Recommendations

From the above findings, the study recommended that government should organise enlightenment programmes that will discourage residents of Patigi LGA from constructing their houses and locating their farmlands along riverine areas. There could be a ban or court order placed in the area with penalty against violators.

Further, there is a need for the dredging of River Niger, Lokoja, Barro and Jebba Dam. This is fundamental to prevent further destruction of property and loss of lives in the

flood-prone communities in Patigi Local Government Area of the State. The Federal Government should take the issue of dredging very seriously as failure to do this would cause further destruction in the affected communities.

The National Emergency Management Agency (NEMA) should be more proactive in handling cases of flood disasters in the country. Relief materials should be adequately and regularly supplied to the affected households or individuals. The agency should work with the State Government to cushion the adverse socio-economic effects of the disaster on poor households that are affected.

The flood-prone communities in Patigi should be relocated to upland areas. Government should evacuate people living in communities that are susceptible to flooding even though this requires a huge amount of money. New settlements should be created and low-cost houses should be provided for them. Also, government should provide soft loans and other means of financial assistance to those who lost their means of livelihoods to flood disasters. Government should work with relevant agencies, Federal Government and Non-Governmental Organisations to achieve this.

Moreover, the National Emergency Management Agency should be giving early warning sign on flashpoint areas. The 48-hour flood alert that the agency normally gives is too short for the flood-prone communities to prepare and evacuate. NEMA should develop a better means for sending warning signal perhaps a month or two before the incident.

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