**Residents’ Self-rated Effects of a flood incidence in selected. Neighbourhoods North Central Nigeria.**

The impact sustained from flood especially in developing countries, Nigeria inclusive has become increasingly significant in the last centuries. The pattern of climatic change has aggravated the adverse effects of flooding in low income communities (Odunsi, 2021; Bamidele etal, 2024). Between 2010 and 2020, flood related laces accounted for an average of 1.5 million dollar property damage across developing counties. Sub-Saharan African countries are disproponately affected by flood occurrences (Buba, et al., 20210. More than 452 communities in the region experience adverse flood effects, ravaging both lives and livelihoods (Buba, etal, 2021).

Flood-prone areas in Nigeria are experiencing rapid growth in population in c=recent times and thus becoming more vulnerable to flood disasters. As population continues to increase in these areas, there is in turn increase in built up areas and encroachment into ecolocigously sensitive locations (Akinola & Bako, 2021). North central is particularly an extremes flood location in the country owing to its proximity to rivers Niger and Benue on one hand and its low terrain on the other hand. The 2022 flood ravages the area on an annual bases, affecting several communities and activities. Due to its strategic location in the country, it serves as gateway to from the North to other parts of the country. However, flood occurrences hinder movements of traffic and therefore crippling human activities to a great extent. It is thus imperative to examine the affects of flood incidence as reported by the affected residents I the study area.

Study Area

The North central zone of Nigeria encompasses six states and the Federal Capital Territory. Owing its strategic location contingent to the Niger and Benue Rivers, the zone experiences flooding on an annual basis (Itopa, 2019; Badmus et al, 2024). Low lying areas along the river basin are at extreme flood risk. Economic and infrastructural losses resulting from flood incidence represent the most significant challenges confronting environmental sustainability in the study area (IVEMA, 2020). As documented by the State Emergency Management Agency (2017) a total of property damage was recorded between 2012 and 2017, including displacement of over 3000 residents across 200 communities in the zone. This calls for an assessment of residents opinions on the effects of flood incidence with specific reference to the 2022 floods events in adversely affected neighbourhoods in North central Nigeria.

Methodology

A survey research involving data collection using structured questionnaires and interview guides was accepted. Six neighbourhoods in the flood prone areas identified by earlier reports by SEMA (2022) as world hot by floods were selected for the household survey. Houses along flood-prone streets were identified through physical counts. Questionnaire was administered on selected samples of respondents. Furthermore, a random start consisting one out of the first five buildings along each flood prone street was chosen. Sub-quently, every fifth building was qicked in sequential order for questionnaire administration. A household head or any other representative above the age of 18 year was selected to be administered questionnaire. Interviews were conducted with three traders, and three farmers and two officials of the state emergency management agencies in the states were the selected neighbourhoods are located. The interview as conducted to elicit information on their views about areas of flood imparts, their opinions on what institutions should do to reduces impacts and how they have coped with flood issues.

**Table 1. flood prone Neighbourhoods in the study area and samples selected.**

**Neighbourhood No of buildings along selected sample selected**

**flood prone stares**

Ganaja 181 39

Vandekyo 205 41

Kilema 187 38

Sabopegi 145 29

Adankolo 201 41

Marine 154 31

Total 1,073 217

Author 2024

Date collected were analysed using both descriptive and infential streetistics. Residents responses on floods effects were rated on a 5-point likert scale, raying from 1 to 5. Indicating low to high impact respectively.

**Results and Discussion**

The socio-Economics and housing characteristics of the Neighbourhoods were analysed in percentages. It was shown through findings that 58.5% of the respondents were male while 41.5% were female. The results indicates that there was a bit higher proportion of male over female headed households in the study area.

All age categories were represented. There was dominance (59.5%) of those in the work force age bracket (21 to 45 years). About 21.5% were between 46 to 60 years. While 20.0% were above 60 years of age. While half (61.5%) of the respondents earned less than N30,000. This implied that a greater proportion of the residents in the study area lived below the minimum wage stipulated by the federal government. Most of the respondents (51.1%) were actively engaged in farming while 15.7% represented civil servants and 33.3% were traders.

As regards educational background.

Housing characteristics most (66.3%) of the houses in the selected flood prone neighbourhoods under study were either along flood plains, on river courses or were on river banks. It was observed that 71.5% of the buildings were located on sites less than the recommended set back (20m) to rivers while only 28.5% were 20m or more to rivers. Many \*48.8%) of the buildings in the study area were not served with drainages while others (51.2%) had access to drainages blocked with refuses and silts which could prevent any flow of excess flood run offs.

**Residents self-rated flood Effects**

About (12.2%) rated flood effects livelihoods as very high, 10.3% rated it high, as much as 50.1% rated it moderate while 32.5% rated it 10w. implication of the result may be owing to the fact that most residents must have build study after several flood experiences in the study area. It was also shown in findings that 21.5%, 51.3% and 41.17% effects high on movements, infrastructure damage, and displacement/loss of lives respectively. About 46.5%, 19.5% and 21.4% rated flood effects low on movements, infrastructural damage and displacements/loss of lives.

About one-third, representing 33.0%, 29.2% and 32.9% of the respondents reported low flood impacts on movements infrastructure damage and displacement/loss of lives. The results from the current study is in indication that flood adverse effects as reported by respondents were more significant on infrastructural damage displacement/loss of lives

This is in line with existing studies by Wahab and Ojolowo (2019) Okunola and Baka (2023) and Bamidele et al, (2024) that flood adversely displaced residents and disrupted infrastructure in 2023.

Results from interview guide showed that most flood incidence were as a result of release of dam when it has excess water and also as a consequence of residents non adherence to early warning by Emergency Management Agencies. Some residents suggested that sensitization needs to be intensified as regards flood occurrences and its adverse impacts, effective development control in flood prone areas and provided adequate support to flood affected victims during recovery and rehabilitation. Ost of the interviewer said they coped with floods by relocating temporarily to higher grounds, while some of them resort in using boots for movements when roads are submerged. Residents also provided self-constructed drains to allow easy flow of water.

**Mean Index of Resident rated Flood Effects**

As reported by respondents, flood impart an infrastructure had the highest mean index (4.2), followed by displacement/loss of lives (3.8), and movements (3.0). the impact with the lowest mean index represented should prohibited by enforcing land use control.

* Effective environmental lawa prohibiting dumping of waste into drains should be enforced.
* Institution should provide adequate supports for flood affected victims especially during recovery and rehabilitation.

Fatemi, M. N. Okyere, S. A. Diko, S. K., f. Kita, M. Shimoda; M., and Metsubara, S. (2020) Physical Vulnerability and Local Responses to flood Damage in peri-urban Areas of Dhaka, Bangladesh sustainability, 12.

Chawdbury R., J & Oarida, Y (2023).

Flood shocks and Post-disaster Recovery of Households: An Empirical Analysis from Rural Odisha, India, International Journal of Disaster Risk Reduction, 97. https/doi.org/10.1016/j.ldrr.2023.104070.

Odunsi, F. (2021). Household Resilience to flood Disaster in Lagos. PhD. Thesis submitted to the Department of Urban and Regional Planning Obafemi Awolowo Universit, Ile-Ife, Osun State.

Livelihood (2.3). this implies that infrastructural damage was the most severe adverse impart of flood in the study area.

The average mean index of flood impart obtained was 3.6, meaning that flood effects were rated high in the study area. Earlier studies by Buba et al (2022) and Chawdbury and Parida (2023) confirmed that floods in the North central, Lokokja in particular was significantly high as significant monetary loss and infrastructural damage were recorded.

**Summary of Findings**

The effects of floods as rated by affected residents were examined in this study. It Is shown in findings that residents rated the imparts of floods on infrastructure and displacement highest while others effects such as its effects on livelihoods and on movements moderate and low respectively. It was further shown in findings that resdents developed self-desined measures for alleviating flooding effects on their lives and livelihoods.

Conclusion and Recommendations from the results of findings in the study, it could be deduced that floods had significant adverse infrastructural and displacement effects in study area. Based on findings in the study the following recommendations were made

Housing development along river courses

World Meteorological Organisation (2008). Urban flood Risk Management – A Tool got Integrate Flood Management, 2008 A joint Initiative of the WMO and Global water partnership Technical Document No. 1

Okunola, H. O, & Bako, I.A. (2021). Exploring Residential Characteristic a Determinants of Households Adaptation to climate change in Lagos, Nigeria, International Journal of Disaster Resilience in the Built Environment, DOI 10. IJDRBE-05-2021-0060.

Bamidele Eko, E.E, Nwachi, C.L, Afolabi D.S & Fagbule, O.J. (2024).

An Evaluation of the determinants coping Behavious in Flood-Affected Areas in Lokoja, Nigeria, Confluence Journal of Rnvironmental Studies 18 (3), 10-25.

Buba, F, N., Obaguo, S., Ogah, O. & Ajayi, F.O. (2021). A Participatory Assessment of the impact of Flooding in some Communities in Lokoja, Kogi State, Nigeria, American Journal of Climate change, 10 (i) 12-31.