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INVESTIGATING THE TRIGGERS OF HOUSEHOLD PREPAREDNESS TO FLOOD HAZARD IN NIGERIA

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Abstract

Floods have become more frequent in Nigeria as a result of climate change and severe rainfall events. In response to this growing issue, various measures have been taken by the government and stakeholders to address flood impacts and mitigation. However, public perception of flooding risks and household preparedness to flood hazard have been poorly addressed. This paper aims to discuss household preparedness to flood hazard in Nigeria and provide researchers with relevant information and gaps to fill for further research. The lack of preparedness, poor budgetary allocation for disaster prevention, and low risk awareness hinder effective responses in case of a natural disaster. Although hazards such as floods cannot be prevented, household preparedness can mitigate the vulnerabilities associated with flood disasters. As such, the paper recommends a holistic adoption of disaster risk reduction strategies at state and community levels. Finally, the paper concludes that additional research is needed to investigate the problems of household preparedness to flood hazard, as current data is incomplete and unsatisfactory.

Introduction

The increase in the frequency of floods has become a global issue, and it has affected Nigeria as well. Climate change and severe rainfall events have contributed to this increase in flooding occurrences, and it has led to the need for improved adaptation to flood risks. This paper aims to explore household preparedness to flood hazard in Nigeria and generate information and gaps to be filled for future research. Although measures have been taken by the government and stakeholders to mitigate flood impacts, the issue of public perception of flooding risks and household preparedness to flood hazard have been overlooked. Preparedness is a crucial aspect of disaster management, and its implementation can address root causes and dynamic pressures before a disaster occurs. It can mitigate the vulnerabilities associated with flood disasters. The lack of preparedness, poor budgetary allocation for disaster prevention, and low risk awareness hinder effective responses in case of a natural disaster.

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The paper recommends the adoption of a holistic disaster risk reduction strategy at state and community levels to ensure an effective response to flood hazards. Finally, the paper concludes that additional research is needed to fill the gaps in the investigation of household preparedness to flood hazard, particularly in Nigeria, to enhance current knowledge and improve disaster management.

2.0 Description of the Study Area

Nigeria, a sub-Saharan West African country, is on the Gulf of Guinea, east of the Greenwich and north of the equator. The country, made up of 36 states including the federal capital territory (FCT), Abuja, lies between latitudes 4° and 14°N, and longitudes 3° and 15°E, with a total land area of 923,768 km2 and borders with Republics of Benin and Niger, Chad, and Cameroon. It maintains a large expanse of coastline, over 853 km in magnitude, with hydrological features which includes the rivers Niger and Benue, both of which confluence at Lokoja, and flows further southwards passing through the Niger Delta to empty into the Atlantic ocean. The 2006 census confirmed over 140 million people in Nigeria, but this population has grown steadily, and is presently estimated at more than 180 million people, making the country the seventh most populous country in the world [6]. Nigeria is one of the eight countries expected to account collectively for half of the total population increase in the world from 2005-2050, and will by 2100, record a population amounting between 505 million and 1.03 billion people [10].

3.0 Preparedness to Flood Hazard

Flood preparedness plan (FPP) for households is about putting in place a set of appropriate arrangements in advance for an effective response to floods. This is an important phase of flood disaster management which is almost being neglected in developing countries. There is a tendency to rely more on what the government can do while neglecting self-help options. Thus disaster risk reduction measures that reduce the vulnerability of households to flood disasters are advocated for in view of the fact that the cost implication of recovery and rehabilitation measures are enormous compared to preventive strategies such as preparedness actions. Residents' low risk awareness and preparedness may hinder an effective response in case of a natural disaster, thus becoming key issues to be considered for effective emergency planning and management. A common assumption is that the residents' low risk awareness is among the main causes of an insufficient level of preparedness, which in turn generates inadequate response to disasters.

Indicated that disaster preparedness is positively associated with the feeling of worry about the risk. Similarly, the willingness to adopt precautionary measures is positively related in many cases with the residents' level of risk awareness. The logic behind the examples reported above is that awareness of risk automatically translates into an actual behavior (i.e. adoption of precautionary measures/actions) or influences its adoption.

3.1 Household Preparedness to Flood Hazard in Nigeria

Assessed public perception of flooding in Donga town in Taraba state, Nigeria. Two wards were purposively drawn out of ten wards. Yamane method of sample size determination was used to arrive at a sample size of 130 for the study. Systematic random sampling was used in the administration of 130 questionnaires to respondents. Non parametric statistics of Spearman rank correlation and descriptive statistics were used to analyze the data. The results of the findings showed that majority of the respondents were aware that their area was prone to flooding. The correlation analysis result was insignificant which implied that in Donga town, educational level of Perception of flooding was influenced by factors other than respondent's literacy level. The conclusion from the study was that rainfall intensity is the main cause of flooding in the study area, and individual's response to flooding was poor.

Evaluated the level of households' preparedness on flood management along Apete River in Ibadan, Nigeria. A structured questionnaire focusing on socio-economic characteristics of residents, causes, effects of flood disaster, control measures and households' level of preparedness on flood management was administered to 172 households' heads in the study area. In depth interviews were conducted with community representatives on coping strategies employed. The findings revealed that there is significant relationship between the effects of flood disaster and household's preparedness on flood management in the study area. [15] Examined Disaster Risk Reduction (DRR) in the light of household preparedness in Benin City, Nigeria. The study's findings confirmed that there is no household preparedness in relation to flood. The ANOVA test shows that there is a significant difference among households in terms of their flood disaster preparedness. A multiple correlation analysis indicated that religious belief and lack of funds determine household preparedness as these two variables explain the highest variance in the socio economic factors influencing utilization of flood disaster preparedness measures. Even though preparedness is an effective flood disaster mitigation measure, it is hardly practiced by households in areas identified to be flood prone in Benin City. Rather the households depend more on reconstruction and rehabilitation which are capital intensive measures and actions taken in most cases after the flood has had devastating effects on the populace. Household/community preparedness can reduce the impact of flood disasters especially for the most vulnerable in flood prone areas.

[16] Investigated the emergency preparedness and response to Ibadan 2011 Flood Disaster in Oyo State, Nigeria. Key informant interviews were conducted with participants from

National Emergency Management Agency (NEMA), Oyo State Emergency Management Agency (SEMA), Nigerian Meteorological Agency (NIMET) and other stakeholders. The result indicated that the affected communities were not effectively informed to enable them prepare for the flood disaster by emergency agencies due to financial constraints and ineffective communication system. The study established a gap in public/institutional flood hazard preparedness and responses.

4.0 Conclusion

Some affected communities in conclusion, were found to have not been effectively informed to enable them prepare for flood disasters by emergency agencies. Some findings revealed that there is significant relationship between the effects of flood disaster and households preparedness on flood management in certain areas in Nigeria. Other studies confirmed that there is no household preparedness in relation to flood and that religious belief and lack of funds determine household preparedness in other areas. The work of [17] "Flooding and Flood Risk Reduction in Nigeria: Cardinal Gaps" Clearly indicated the results of literature search of issues relating to flooding in Nigeria. Flood impacts and mitigation have received ample attention while improving public perception of flooding and preparedness to the risks are poorly addressed. This is a reason for concern knowing that the success of present approaches of flood risk reduction depends on public participation which is driven by public perception and high awareness of the hazard. These indicate that investigation of the problem area is unsatisfactory and incomplete especially in Nigeria.

4.1 Recommendations

It is therefore recommended that:

1. There should be a holistic adoption of disaster risk management strategies of mitigation, preparedness, response and recovery at states and community levels
2. There should be more investigations on disaster risk perception, hazard awareness and preparedness.

References

Peduzzi P, Dao H, Herold C, and Mouton F. (2009). Assessing global exposure and vulnerability towards natural hazards: the disaster risk index, *Natural Hazards Earth System. Science* 9: 1149-1159.

Raaijmakers R, Krywkow J, van der Veen A. (2008). Flood risk perceptions and spatial multi-criteria analysis: an exploratory research for hazard mitigation. *Natural hazards* 46: 307-322.

Ogunboded, E.F and Sunmola, R.A. (2014). Flooding and traffic management in Akure (Nigeria) metropolitan environment. *International Journal of Innovation and Scientific Research* 7: 121-130.

NEMA (Nigerian Emergency Management Agency). (2013). Report on flood disasters in Nigeria. Abuja: Government Press.

Olorunfemi F.B. (2011). Managing flood disasters under a changing climate: lessons from Nigeria and South Africa. NISER Research Seminar Series, NISER, Ibadan.

Obeta C.M. (2014). Institutional Approach to Flood Disaster Management in Nigeria: Need for a Preparedness Plan. *British Journal of Applied Science & Technology* 4: 45754590.

IFRC, (2007). International Federation of Red Cross and Red Cresent Societies. World Disaster Report. Geneva.www.ifrg.org/publicat/wdr/2006

Tierney,K.T., Lindell, M.K., and Perry,R.W. (2001). Facing Hazards and Disasters: Understanding Human Dimensions. Joseph Henry Press

Enenkel, M. (2010): Optimisation of Water-Related Preparedness measures-Case Study: Floods in Tanzania. Diploma Thesis. Natural Resources Management and Ecological Engineering Institute of Sanitary Engineering and Water Pollution Control of the University of Natural Resources and Applied Life Science, Vienna.

United Nations. (2004). World Population to 2300. New York: United Nations Department of Economic and Social Affairs, Population Division.

Terpstra, T., Lindell, M. and Gutteling J. (2009). Does communicating (flood) risk affect (flood)risk perceptions? Results of a quasi-experimental study. Risk Analysis 29: 1141-1155. [12] Floyd D, Prentice-Dunn S, Rogers R.W. (2000). A meta-analysis of research on protection motivation theory. *Journal of Applied Social Psychology 30*: 407-429.

Kehinde, T., Godwin, A.S, Timothy, A.A., Godwill G.J., and Christopher, N. (2016).

Assessment of People's Awareness and Perception of flooding in Donga Town, Taraba State, Nigeria. *Journal of Geoscience and Environment Protection*, 4: 54-62 http://dx.doi.org/10.4236/gep.2016.45006

Odunola, O. Olutayo, A, Balogun, O and Femi A. (2015). Analyzing Household Preparedness on Flood Management in Riverside: A Focus on Apete Community in Ibadan, Nigeria. *IOSR Journal of Humanities And Social Science.* 20 (9), 07-32.

Ezemonye, M. N and Emeribe, C.N. (2014). Flooding and Household Preparedness in Benin City, Nigeria. *Mediterranean Journal of Social Sciences MCSER Publishing, Rome-Italy* 5(1) 2039-2117 *Doi:10.5901*/mjss.2014.v5n1p547

Adejuwon G.A. and Aina, W.J. (2014). Emergency Preparedness and Response to Ibadan Flood Disaster 2011: Implications for Wellbeing. *Mediterranean Journal of Social Sciences MCSER Publishing, Rome-Italy,* 5 (8) 2039-2117 Doi:10.5901/mjss.2014.v5n8p500

Nkwunonwo, U.C, Malcolm W, Brian B. (2015). Flooding and Flood Risk Reduction in Nigeria: Cardinal Gaps. *J Geogr Nat Disast* 5:136. doi: 10.4172/2167-0587.1000136