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Flood Hazards, Vulnerability and Adaptations in Upper Imo River Basin of South Eastern Nigera Introduction

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Abstract : Imo River Basin is located in South Eastern Nigeria comprising of 11 states of Imo, Abia, Anambra, Ebonyi, Enugu, Edo, Rivers, Cross river, AkwaIbom, Bayelsa, Delta, and Bayelsa states. The basin has a fluvial erosional system dominated by powerful rivers coming down from steep slopes in the area. This research investigated various hazards associated with flood, the vulnerable areas, elements at risk of flood and various adaptation strategies adopted by local inhabitants to cope with the hazards. The research aim is to identify, examine and assess flood hazards, vulnerability and adaptations in the Upper Imo River Basin. The study identified the role of elevation in cause of flood, elements at risk of flood as well as examine the effectiveness or otherwise of the adaptation strategies for coping with the hazards. Data for this research is grouped as primary and secondary. Their various methods of generation are field measurement, questionnaire, library websites etc. Other types of data were generated from topographical, geological, and Digital Elevation model (DEM) maps, while the hydro meteorological data was sourced from Nigeria Meteorological Agency (NIMET), Meteorological stations of Geography and Environmental Management Departments of Imo State University and Alvan Ikoku Federal College of Education. 800 copies of questionnaire were distributed using systematic sampling to 8 locations used for the pilot survey. About 96% of the questionnaire were retrieved and used for the study. 13 flood events were identified in the study area. Their causes, years and dates of events were documented in the text, and the damages they caused were evaluated. The study established that for each flood event, there is over 200mm of rain observed on the day of the flood and the day before the flood. The study also observed that the areas that situate at higher elevation (See DEM) are less prone to flood hazards while areas at low elevations are more prone to flood hazards. Elements identified to be at risk of flood are agricultural land, residential dwellings, retail trading and related services, public buildings and community services. The study thereby recommends non settlement at flood plains and flood prone areas and rearrangement of land use activities in the upper Imo River Basin among others

Keywords : flood hazard, flood plain, geomorphology, Imo River Basin
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