A Systematic Approach to Disaster Vulnerability Assessment in Kano Region, Nigeria

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Keywords: Natural disaster, hazard, isohyets, coping capacity, vulnerability index

Abstract
This study assesses the vulnerability of households to natural disaster in Kano Region. To obtain a representative sample, the region was divided into three agro-ecological zones based on isohyets limits with zone 1 within 500-650 mm annual rainfall, zone 2, +650-800 mm and zone 3, +800 – 1000 mm. Data was collected from each zone by interview of households and disaster management officers covering issues such as disaster occurrence, impact of the most recent disaster and coping strategies. A total of 150 households in each of the zones were selected through stratified sampling and eight officers of different ranks from disaster management agency. The data was analyzed to determine variation in vulnerability between the zones. To determine comparable measure of coping strength between the zones, an index of the relative strength of coping measures at each zone was calculated. The vulnerability index for each reported disaster and for each zone was also computed. The result indicates a marked difference in the disaster occurrences and ranking between the zones as well between the household and disaster management institution. The results also indicate variations between the zones in coping strength and vulnerability index which implies varying local coping capacities. The study recommends that there should be a risk transfer mechanisms whereby those in hazard-prone areas are protected against potentially large losses from disasters by undertaking ex ante measures to reduce the ex post financial consequences. In addition there should be in place other risk reducing mechanisms that could reduce future losses from disasters. These include assuring that proper building codes and land-use regulations are implemented in hazard prone areas coupled with mitigation grants to reduce both economic losses and fatalities/injuries from future natural disasters. The study also recommends collation of baseline data on disaster occurrence, location, type frequency and vulnerability at the local level to ease preparedness that is fundamental to disaster mitigation and management in the state.