



Climate Change and Health Vulnerability in Informal Urban Settlements of Kaduna Metropolis, Northern, Nigeria

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Climate change in Nigeria is occurring against a backdrop of rapid population growth and urbanization, entrenched poverty and a heavy burden of disease, most especially in the northern region of the country. Urban populations living in informal settlements in this region are inherently vulnerable and are likely to be more at risk to climate change, as informal settlements are characterized by overcrowding, poor-quality housing, lack of basic infrastructure, and poverty. Nevertheless, evidence of the associations among weather or climate and health in these populations is lacking, which severely constrains the design of climate change and disaster risk reduction adaptation strategies for the country. As such, this study is aimed at filling this major gap by providing first-hand information on health vulnerabilities to climate change of the population living in such settlements in the Kaduna metropolis. We analysed CMIP5 climate model outputs for future climate over the city, collected detailed social, demographic, economic, and environmental and health data from community members. Using multistage sampling method, household surveys were conducted and focus groups discussion were carried out in selected informal urban communities in the city of Kaduna, and brought these together to assess specific risks to climate change. Our findings reveals that climate change will intensify existing health problems in these communities, where extreme poverty, and especially poor access to clean water and sanitation, renders them already vulnerable to food insecurity and infectious disease. The result also reveals that children and the aged are the most vulnerable groups, although the exact effects of future climate on health depend on underlying vulnerability and local hazards. Community-based activities specifically targeting local needs, such as safe drinking water, sanitation, food security and more reliable income generation are an important strategy for minimizing the adverse impacts of climate change in these vulnerable communities.