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Hot Spots to Potential Impact of Sea Level Rise within Coastal Communities in Lagos State

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Abstract

Global sea level rise (GSLR) is one of the notable consequences associated with the rapid on-going climate change within the Anthropocene period. Also, sea level rise has been identified to be of greatest hazard to globally distributed coastal zones including both natural ecosystems and coastal communities especially Island communities and large coastal megacities in developing countries. Since most coastal communities in Lagos state are below the present sea level, the vulnerability of such communities and inhabiting stakeholders were assessed to determine the potential impact of sea level rise and extreme weather events using a holistic approach and secondary data. From the socio-economic point of view, human settlements, fisheries and agriculture sectors are expected to be among the most impacted socio-economic sectors as they were found to be vulnerable to all impacts considered in this context. The impacts of sea level rise are expected to escalate in communities in which excessive anthropogenic activities such as land reclamation, sand mining, natural ecosystem destruction and ground water abstraction had occurred in comparison to the modeled projections. Population density, geological land forms, infrastructural development and coastal modification are among the factors influencing the vulnerability of different coastal communities. Factors considered with this study indicated that most coastal communities within metropolitan Lagos especially those in Lagos division are at higher risk when compared to less developed coastal communities such as Epe and Badagry. Gradual urban-rural migration with alternative sources of income that are not related to marine might be a plausible solution in mitigating the projected impact.

Keywords: Beach accretion and ground water abrasion, geological land forms, vulnerability