

THE INUNDATION EFFECT OF SEA LEVEL RISE ALONG THE BARRIER COAST LAGOS ISLAND USING GEOSPATIAL ANALYSIS

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ABSTRACT

When considering impact studies of low-lying coastal areas, the important factor to evaluate is the state of the sea level in relation to land. Globally, sea level has been rising during the past century. From literatures available, most of the Nigerian coast will face the consequence of one to two(1 to 2m) meters rise in sea level, which will result from the effects of climate change, resulting to a catastrophic effect on the human activities in these regions. A Geographic Information System (GIS) was used to examine the impact scenarios that sea level rise will have on both land area and population of the study area with a projected inundation zones. Results showed that there is a significant relationship between the income level and vulnerability to flood of inhabitants. This study provides relevant information concerning the implications of Sea Level Rise, which will be useful for coastal planners and managers to develop a framework to support sustainable development along the barrier islands, the coasts, in the light of rising sea levels. Based on findings, the following recommendations are made in respect to inundation effect due to sea level rise in Lagos Island Local Government of Lagos State. the implementations of planning laws and regulations should be monitored and the construction of additional drainages and adaptation to climate change issues is seriously advised.

KEYWORDS: Inundation, Mitigation, Adaptation, Scenarios