EARTH OBSERVATION SYMPOSIUM (B1)
Earth Observation Applications and Economic Benefits (5)

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URBAN DEVELOPMENT TREND AND CLIMATE CHANGE STUDY OVER SOUTHERN CITIES IN NIGERIA USING REMOTE SENSING AND GIS TECHNIQUES.

Abstract

This study examines long term urban development and climate change over southern cities in Nigeria. The target of this study is directed towards comparing urban development rate and variation in climatic condition over three decades. The project sub-divided into 2 parts, the first part will assess rate at which urban development changes (land-use/land-cover transformation) and the second part evaluate changes in climatic elements (Air temperature, Rainfall, Atmospheric humidity and Wind Space) over three decades in major cities in southern Nigeria. The assessment of changes in urban development was examined using satellite imageries and analyzed using GIS and Remote Sensing techniques. The evaluation of changes in climatic elements will involve collection of climate data over same period of time and various climate modeling methods and statistical analysis was be adopted to make research judgments. Vegetation cover and water bodies were found to be greatly degraded due to urban development, socioeconomic growth pattern, increasing population and built up areas in southern cities in Nigeria. The rapid rate of urbanization in the Lagos (0625'N, 0327'E), Ibadan (0722'N, 0358'E), Akure (0715'N, 0505'E) and Ife (0730'N, 0431'E) over the three decades contributed to continue changing pattern of climatic elements over the cities. The results from this research provide massive information about how and why urban development affect climate over the years in southern cities in Nigeria. The study is expected to improve stakeholder awareness and assist in development of long term national strategy on urban development planning and climate mitigation strategies.