Using Earth Observations and GIS technologies to monitor and combat climate change, a case of Kisumu City Kenya

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Abstract

Climate change has been a major concern globally. Global warming, forest fires, rise in sea water levels, unpredictable weather patterns are some of the major effects of climate change. Earth observations provides a platform through which data about the atmosphere and the earth surface is captured, processed and presented to inform policy makers. The use of Geospatial Information Science (GIS) forms a basis to which this data is processed and evidence-based decisions are arrived at. For this case of climate change, real-time spatial-temporal data is processed and hence prediction of climate changes is eased. Satellite imagery is acquired over time, using GIS, these images are processed, map and data outputs are developed which are then analysed to inform the policy makers on what are the best approaches to mitigate the adverse climate change effect or combat further effects due to climate change. A case of Kisumu City, Kenya is used in this study to study climate change and subsequently analysis is done and recommendations arrived at on the best practises on climate change issues.

Key words: *GIS, Climate change, evidence-based decisions, spatial- temporal*