

Analysis of Land Use, Land Cover Changes in Damaturu, Nigeria: Using Satellite Images

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Abstract : This study analyzes the land use/land cover changes in Damaturu metropolis from 1986 to 2005. LandSat TM Images of 1986, 1999, and 2005 were used. Built-up lands, agric lands, water body and other lands were created as themes within ILWIS 3.4 software. The images were displayed in False Colour Composite (FCC) for a better visualization and identification of the themes created. Training sample sets were collected based on the ground truth data during field the checks. Statistical data were then extracted from the classified sample set. Area in hectares for each theme was calculated for each year and the result for each land use/land cover types for each study year was compared. From the result, it was found out that built-up areas have a considerable increase from 37.71 hectares in 1986 to 1062.72 hectares in 2005. It has an annual increase rate of approximately 0.34%. The results also reveal that there is a decrease of 5829.66 hectares of other lands (vacant lands) from 1986 to 2005.

Keywords : land use, changes, analysis, environmental pollution

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