

Spatial Analysis of Land Use/Cover Changes and Urban Expansion in Lusaka City, Zambia

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Major cities in Sub-Saharan Africa have experienced an unprecedented rate of urban expansion, including Lusaka, the capital city of Zambia. Urban expansion has increased the exploitation of natural resources and has changed Land Use and Land Cover (LULC) patterns. In this study, Geographical Information Systems (GISs) and Remote Sensing (RS) were used to spatially analyze the LULC changes in Lusaka City as a determinant of urban expansion. Multi-temporal Landsat Thematic Mapper (TM) and Enhance Thematic Mapper Plus (ETM+) images from 1990, 2000 and 2010 were classified into three categories (Built, Non-Built and Water) and the magnitude of LULC changes are presented. The results show that there has been rapid increase in the built up area of Lusaka City especially between the periods 2000 and 2010. It was observed that the expansion in the built up area is highly characterized by increase in unplanned (slum) settlements. The study has also utilized Census data from the year 2000 to 2010 to determine the driving forces of Urban Growth and express the social economic profile of the city.

Keywords: Spatial Analysis, Land Use/Cover, Urban Expansion, Lusaka City