Using Geographic Information System and Remote Sensing Techniques to Detect Land use Change and Its Impacts on Thohoyandou, Limpopo Province, South-Africa.

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Abstract

Over the years, various human activities such as housing, agricultural, commercial and industrial activities, have led to land use/land cover changes in space and time on Earth. The study utilises Geographic Information Systems and remote sensing techniques to detect the extent of land use/land cover changes on Thohoyandou. The analysis is based on satellite images of Thohoyandou between 2004 and 2013, as well as GIS tools and applications. The satellite images used to detect changes in land use within the study area were of 2004, 2008, 2009 and 2013. Land use identification and classification techniques were also employed to map relevant changes that occurred within the year intervals. The findings reflect the extent to which residential and commercial activities were affected, and how this resulted in the present land cover change in the study area. Recommendations were made to ensure the sustainability of the environment and protection of vegetation amidst developmental activities to foster adequate land use policy to favour various land usage.

Keywords: Human Activities, Land use/Land cover, Remote Sensing

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