IMPACT OF URBANIZATION ON AGRICULTURAL LANDS IN LAFIA LOCAL GOVERNMENT AREA, NASARAWA STATE

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Abstract

Lafia is one of the growing city in Nigeria, yet it lacks reliable, modern, scientific monitoring techniques to effectively monitor and manage land use/cover changes brought about by urbanization. This research looks at the impact of urbanization on agricultural lands in Lafia local government area, Nasarawa state. The capabilities of satellite remote sensing in terms of large spatial coverage, spatial and temporal resolutions adequate for these types of studies, as well as the ability of GIS to handle spatial and non-spatial data, make it the optimal approach for this research. To achieve this, Landsat Thematic Mapper (1986), Landsat ETM+ (1999) and Landsat 8 (2016) were used to provide maps for land use/cover change and analysis. A post classification approach was adopted with a maximum likelihood classifier algorithm. The analysis revealed that Agricultural land has decreased by 8.5 % while built up has increased by 39% population increase and executive lowliness are the driving factors of land use change and farmland has 0.6% of covering to built-up in the next 10 years. Agricultural lands and vegetal cover are most threatened, and most land allocated for these uses has been legally or illegally converted to other land uses. The continual increase of the aerial coverage of built up area needs to be checked by promulgating a law of unlawful expansion to achieve sustainable urban and environmental development and planning in the study area.

Keywords: Urbanization, GIS, Remote Sensing.