

APPLICATION OF REMOTE SENSING TO LAND ENCROACHMENT IN LAGOS STATE UNIVERSITY, OJO, NIGERIA

¹Safiyanu Garba Yauri, ²Onogu, Jonathan Ojonugwa, ¹Aminu Z and ³Idris Umar

¹Dept. of Geography, Federal University, Birnin Kebbi, Kebbi State, Nigeria

²Dept. of Geography, Remote Sensing Option, University of Lagos, Nigeria.

³Federal Capital Territory Administration

Corresponding Author's email: suffeez2@gmail.com



Abstract

Land use procurement and its proper usage is one of the major challenges facing most of public institutions in developing cities. Lagos State University (LASU) is a state owned university established in 1983 with main campus at Ojo Area of Lagos State, it covered an area of 831,101 hectares, divided into three parcels- A, B and C, the detail survey reveals a total of 153.242 hectares for parcel A, 219.451 hectares for parcel B and 179.536 hectares for parcel C, LASU built-up area is located on parcel C with 141.721 ha (79%) of the total 179.536 ha has been utilized by LASU main campus and the remaining 37.815 ha (21%) of parcel C has been encroached by Land grabbers. This Study employed remote sensing and GIS techniques to examine the extent of land encroachment in LASU parcel C. The remote sensing data used was generated using UAV inspire I Drone image Ariel survey (150m Alt). The mosaic imagery with the aid of pix4D was overlaid on the surveyed parcel C to determine the extent and the volume of properties involved. ArcGIS 10.6 was used for land use classification for the encroached portion. Results revealed 97 buildings for current LASU built-up area. In contrast, there are 2,512 buildings in encroached sections of parcel C. Similarly, residential land use occupied (60%), mixed land use (30%) and (10%) commercial land use. Land use Land cover change detection, Multi criteria evaluation (MCE) and time series analysis was used for final map of the land encroachment analysis. The implication of this is that most of the land set aside for future use by LASU has been taken over by individuals. Underlying reason for land take over by individuals need to be investigated by future studies.

Keywords: Land use categories, encroached land, remote sensing, GIS