

**THE URBAN SPRAWL MEASUREMENT IN EGBEDA LOCAL
GOVERNMENT AREA, IBADAN**

BY

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ABSTRACT

This study identified and examined the urbanized part of Egbeda Local Government Area of Oyo state and calculated the rate of expansion of the urban section, the spatial pattern of sprawl and dispersion of its land development (built-ups) with a view to determining rate of urban sprawl.

The study was based on data generated from the 1964 and 1973 air photos as well as three satellite imageries, namely, SPOT-XS 1986, SPOT-P 1993 and Landsat-ETM 2000 of Ibadan. Both the air photos and the satellite imageries were processed using visual image interpretation and digital image processing techniques particularly to delineate Egbeda L.G.A. Maps of Egbeda settlement (1989) and Ibadan and environs (1995) were then used to create point map and to georeference the images.

Supervised classification, overlay operations and analysis of data generated for this study were carried out using ILWIS GIS version 3.2 software package. The entropy method with integration of GIS (which involved buffering operation) was used to measure the degree of spatial dispersion of build-up areas in Egbeda Local Government Area over the study period. The buffering operation was performed using Arc View GIS version 3.2 software. The imagery analysis was supported by ground truthing.

The findings showed that Egbeda Local Government Area which covered an area of 233 km², was completely under rural land uses/covers in 1964. Urban expansion overtook the area and engulfed 0.53km², 40.7km², 59.04km² and 76.5km² in 1973, 1986, 1993 and 2000 respectively. Based on the average rate of expansion between 1993 and 2000, it was projected that urban expansion would engulf 191.7km² of the total area of Egbeda Local Government Area by 2020.

The study also revealed that the entropy value which was 0.093 in 1986, increased to 0.180 (93.5%) in 1993 and dropped to 0.178 (91.4%) in 2000. These entropy values indicated that land development (built-ups) was dispersed away from Ibadan – Iwo road and Ibadan – Ife expressway, and that land development (built-ups) was more

dispersed between 1986 and 1993 than between 1993 and 2000. The study generated urban sprawl indices like population growth rate, rate of expansion, percentage agricultural land loss, per capital consumption, percentage built-ups, percentage change in population and density of land development within the period of 1964 to 2000 to develop a GIS database for monitoring urban expansion in the study area.

The study concluded that rapid urban expansion had converted 32 villages and valuable agricultural lands for urban land uses. It went further to show the generation of urban sprawl by Ibadan – Iwo road and Ibadan – Ife expressway. However, of importance is the fact that the study showed that urban development occurred in total neglect of urban and town planning laws in the study area. Thus, low-density sprawl development was found to predominate in the study area.