
**Problems and Implications of Changing Land Uses Along Roads in Calabar Municipality,
Cross River State**

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ABSTRACT

The rapid rate of changing land use in urban areas has reached alarming proportions. These changes are observable along major transport routes and virtually all changes that occur on land have profound effects on roads. The aim of this study was to assess the problems as well as the implications of changing land uses and traffic congestion in the study area. The study adopted the systematic random sampling technique to obtain data through questionnaire administration. Field survey was undertaken using the road network map and the land use map of the study area. Some of the problems noticed along roads in the study area include: traffic congestion, parking inadequacies, accidents, haphazard/indiscriminate display of signpost/billboards, over stretching of road infrastructures and noise pollution. These problems have serious implications on the environment and in order to ameliorate the problems posed by changing land uses in the study area, the following recommendations were suggested; closure of land uses that do not have adequate parking space, embarking on land use and transportation studies from time-to-time particularly in areas where these changes perceived, monitoring the changes in land use along roads in order to give a vivid picture of the changes over time as well as address the problems associated with such changes and restriction of unnecessary change in use of land.

KEYWORDS: Parking, land use, traffic, roads and transportation

Introduction

In recent times, it has been difficult to define a particular land use as land is made to serve different purposes. Oduwaye (2013) noted that in Lagos Metropolis, land use changes have been sporadic due to improper monitoring of the changing structure and widespread urbanization which has resulted to a change of the land use structure from a simple pattern to a complex one. Changes in the use of land is becoming challenging due to population increase, increasing living standards, evolving technology, new ways of life and increase in economic activities. More so, urban areas are faced with the challenges of urban mobility as land uses along major transport routes change rapidly.

Changing land use in urban areas is commonly noticed along major roads. The present situation in Calabar Municipality indicates that these land uses (residential, commercial and public) are located along some of the major roads such as Eta Agbor Road, Murtala Mohammed Highway, Calabar Road, MCC Road, IBB Way and Marian Road. In the past five years, there have been rapid changes in the residential land uses, some of the residential uses have converted to the commercial and public land uses. These land uses (commercial and public land uses) which are high traffic generators and attractors have impacted the traffic situation in the study area as these major roads carry more vehicular and pedestrian traffic thereby putting the road network and users at a greater risk.

However, some factors influence change in the use of land, these include: social, economic, institutional, etc. Adebayo (2009) stated that for economic reasons, land and buildings will continue to change in use from a lower order to a higher status in order to attain optimal use. Hill (1989) enumerated the factors to include: personal choice, legislation, government policies and plans, decision of developers or transportation entrepreneurs, the nature of the land itself and the availability of technology to develop the land. Turner and Meyer (1991) listed the possible factors that drive land use change to include: population, level of affluence, technology, political economy, political structure, attitude and values, while Garrison and Deakin (1992) enumerated some factors that give land value to include: transportation, land use location, topography and land features such as views, building type, quality and size. On the other hand, Lambin, Geist and Lepers (2003) pointed out that many of the land use changes that occur are due to ill-defined policies and weak institutional enforcement. Martinez (2000) noted that land use and transportation interaction is the result of human behaviour and these interactions between land use and transportation are played out as the outcome of the decisions made by residents, businesses and governments.

Study Area

Calabar Municipality lies between Latitude 4°57' and 5°04' North of the Equator and Longitude 8°18' and 8°24' East of the Greenwich Meridian. Calabar Municipality is bounded in the North West by Odukpani Local Government Area and Calabar River, in the East by Akpabuyo Local Government Area and the Southern shores are bounded by the Calabar South Local Government Area (Figure 1).

Calabar Municipality is one of the oldest existing urban centres in Eastern Nigeria. Apart from being a Local Government Area and the capital of Cross River State, it also plays its role as the headquarters of the Southern Senatorial District. Calabar Municipality developed as a river port and commercial centre. Calabar gained prominence during the early part of the 17th century. This was largely due to the increasing trade relations between the African tribes - the Efiks and Ibibios (Ima, 2008). Calabar Municipality has experienced economic progress through the avalanche of commercial and socio-economic activities and these have brought about tremendous growth in several aspects of urban services to meet the challenges of a state capital.

The construction and rehabilitation of roads have opened up land in Calabar Municipality thereby allowing for competition of road space among road users as private companies, retail stores, hotels, service industries and banks aggregate to take the advantage offered by these good roads. Calabar Municipality has witnessed increase in the flow of traffic. Most of the major roads

in the state now experience road traffic related problems such as parking problems, traffic congestion and road traffic crashes.

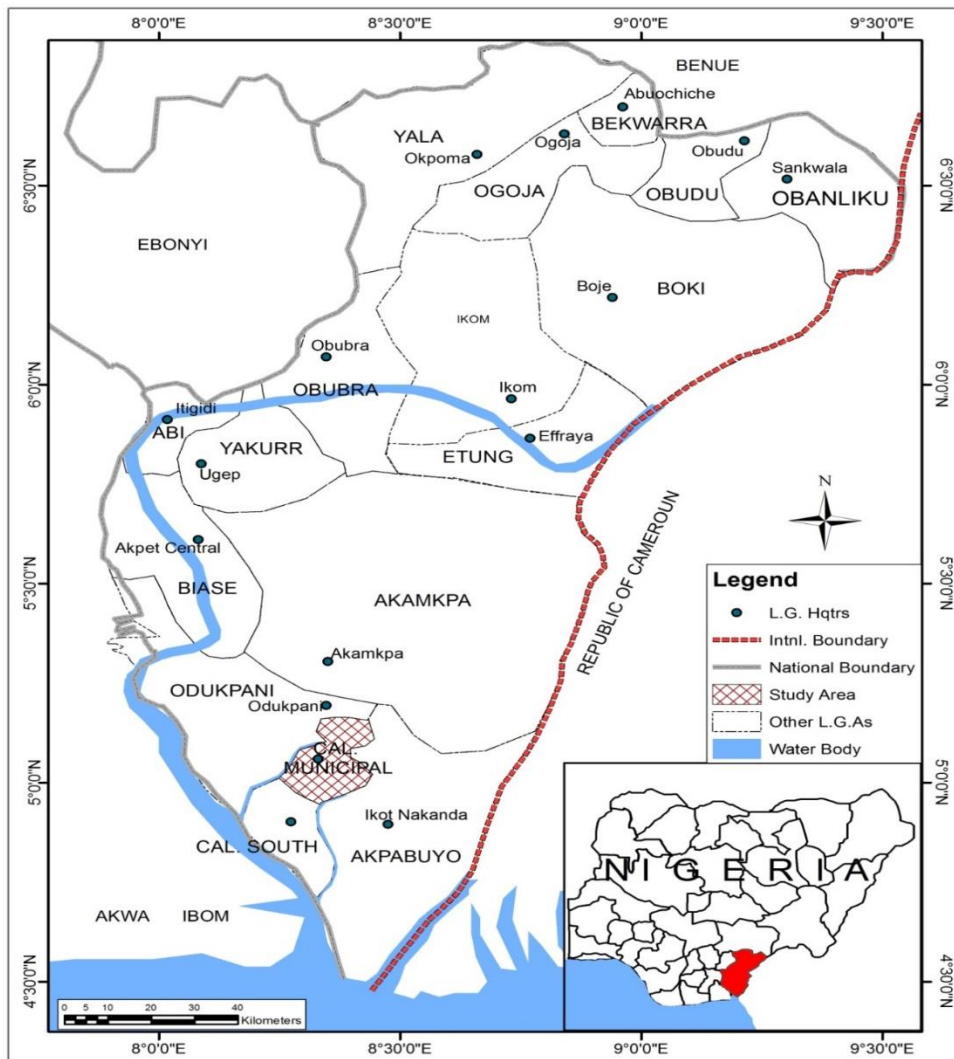


Figure 1: Calabar Municipality on the map of Cross River State

Source: GIS Department, Ministry of Lands and Town Planning, Calabar, Cross River State

Methodology

The study also adopted the systematic random sampling technique. Respondents were systematically selected along the major roads until the required sample was obtained. In each of the major roads, respondents were selected from every 4th building. The skipping range was determined by dividing the total number of buildings along the sampled roads by the sample size (1,847/461). Consequently, the questionnaire was administered to head of households in each of the building.

Discussion of Results

Table 1 shows the different factors that influence changing land use in the study area. 113 representing 27% of the respondents believed that increase in demand for other land uses such commercial and public land uses influenced changing land use in the area. 97 representing 23% of the respondents were of the opinion that individual preferences influenced changing land use in the area. A total of 82 respondents representing 19% of the respondents agreed that the condition of the road/ good access offered by roads influenced changing land use in the area, 69 representing 16% of the respondents agreed that availability of infrastructures influenced changing land use in the area, and 65 representing 15% of the respondents agreed that government policies influenced changing land use in the area.

Table 1: Factors influencing changing land use in the study area

Factors	Frequency	Percentage (%)
Increase in Demand	113	27
Individual Preferences	97	23
Condition of Road/ Access	82	19
Availability of Infrastructures	69	16
Government Policies	65	15
Total	426	100

Field Survey (2014)

Table 2 represents the problems associated with changing land use along transport routes in the study area. 147 representing 35% of the respondent agreed that traffic congestion was one of the major problems noticed along roads as a result of changing land use, 140 representing 33% of the respondents noted that parking problems was one of the major problems noticed along roads as a result of changing land use in the study area 65 representing 15% of the respondents noted that noise pollution was one of the major problems noticed along roads as a result of changing land use. 44 representing 10% of the respondents noted that accident was one of the problems noticed along roads as a result of changing land use in the study area and 30 representing 7% of the respondents agreed that indiscriminate/haphazard display of bill boards/signposts was one of the major problems noticed along roads as a result of changing land use in the study area.

Table 2: Problems noticed along roads as a result of changing land use

Problems	Frequency	Percentage (%)
Traffic Congestion	147	35
Parking Problems	140	33
Noise Pollution	65	15
Accident	44	10
Indiscriminate/haphazard display of bill boards/signposts	30	7
Total	426	100

Field Survey (2014)

Table 3 revealed the implications of changing land use on roads in the study area. 152 representing 36% of the respondents were of the opinion that there will be increase in traffic problems, 143 representing 34% of the respondents agreed that there will be decrease in housing stock. 78 representing 18% of the respondents agreed that there will be increase in the rental value of land uses while 53 representing 12% of the respondents agreed that quality of the environment will deteriorate. The implications of changing land use on roads in the study area; these include traffic, housing and economic implications. The traffic implications include traffic problems such as traffic congestion, delay in journey, parking problems and increase in traffic noise which constitutes a serious nuisance. On the other hand, the housing implication of changing land use along roads in the study area is that the succession of residential land use by other uses will result to shortage in the stock of houses due to the conversion as well as change from residential use to other uses. It also has economic implications, competition among land users will ensue. The competition will result to escalating rental value of land uses from time to time thereby making the rental value of these land uses difficult to predict.

Table 3: Implications of changing land use on roads in the study area

Implications	Frequency	Percentage (%)
Increase in Traffic Problems	152	36
Decrease in housing Stock	143	34
Increase in Rental Value of Land use	78	18
Deterioration of the Quality of the Environment	53	12
Total	426	100

Field Survey (2014)

Conclusion

The study investigated the problems and implications of changing land uses along roads in Calabar Municipality, Cross River State. It was found out from the study that different factors influenced changing land use in the area, these factors included: condition of the road as well good access offered by the roads, increase in demand for commercial and public land uses, government policies, individual preferences and availability of infrastructures. The study revealed that the following problems were associated with changing land uses along roads; traffic congestion, inadequate parking spaces, accidents, noise pollution and haphazard display of signposts/billboards.

On the other hand, these problems have grave implication on the study area as these problems willing turn impact negatively on the traffic, housing and economic situation of the area and the environment as well. The findings of this study agree with the findings of Okon (2008) that overconcentration of vehicles and commercial activities have great implications on intra-city and environmental quality in terms of noise pollution, accidents, safety, security and aesthetics.

Recommendations

Based on the findings, the following recommendations have been suggested:

- i. Closure of land uses that do not have adequate parking space.
- ii. Embarking on land use and transportation studies from time-to-time particularly in areas where these changes perceived.
- iii. Monitoring the changes in land use along roads in order to give a vivid picture of the changes over time.
- iv. Siting and display of billboards and signposts should be subjected to the approval of the Municipal Planning Authority.

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